IBM®

"Selectric" Typewriter

International Business Machines Corporation
Office Products Division
Customer Engineering

Combined Service Information

IBM "Selectric" Typewriter (7XX)
IBM "Selectric" II Typewriter (8XX)
IBM Correcting "Selectric" Typewriter (8XX)
IBM 96 "Selectric" Typewriter (9XX)

Form No. 241-5114-0

Printed In USA May, 1978

0 COMBINED SERVICE INFORMATION 7XX, 8XX

This publication replaces the "Safety And Services Information" booklet, F/N 241-5516-4, dated June 1975. Included in this publication is all current service information from the "Safety And Service Information" booklet and service information from CEMs through CEM 334.

This publication is to be used with the "Technical Information Index" (TII) printed in the "Selectric" Part Number/Price List. The TII will indicate the page and item number of each piece of information printed in this booklet. Following is a step-by-step explanation of the features of the TII and the "Combined Services Information" (CSI) and their use.

TII Sample

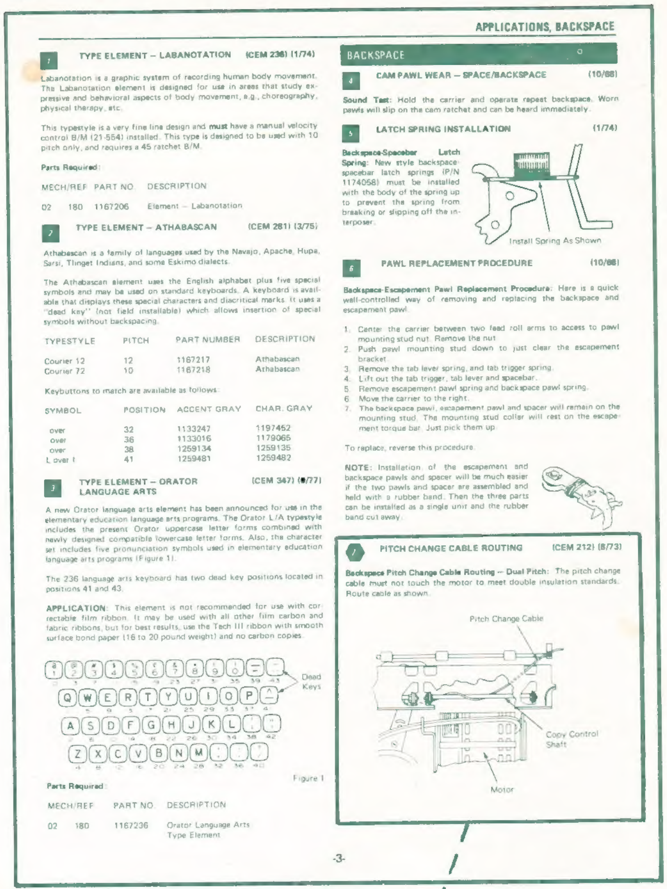
CEM: Original CEM number of the printed information. If this column is blank, the original CEM number is not available.

CEM	Current Pub.	Subject	CSI Page/Item
		BACKSPACE (CONT.)	
341	*CEM*	*Interlock Shaft–Redesigned*	
	CSI	*Latch Spring Installation*	*3-5*
91	*APM*	*Nine Pitch 7X1–Parts*	
321	*CEM*	*Nine Pitch 8X3–Parts*	
	CSI	*Pawl Replacement Procedure*	*3-6*
212	*CSI*	*Pitch Change Cable Routing*	*3-7*
185	*CSI*	*Rotary Backspace Bellcrank Stud*	*4-1*
311	*CSI*	*Rotary Backspace Drum–Removal Tip*	*4-3*
293	*CSI*	*Rotary Backspace Drum Wear*	*4-2*
140	*APM*	*Rotary Backspace–Spring Tension*	

CURRENT PUB.: The location of the current information. If "CSI" is in this column then the far right column labeled "CSI page/item" will indicate the page number and item number of this information in this publication (CSI). If "CEM" is in this column, the information is in a current CEM and the CEM column indicates the current CEM number. If "APM" is in this column, the information is in the parts section or the adjustment section of the Adjustment Parts Manual.

(See Page And Item Samples For Explanation)

Page Sample



APPLICATIONS, BACKSPACE

1 **TYPE ELEMENT – LABANOTATION** (CEM 236) (1/74)

Labanotation is a graphic system of recording human body movement. The Labanotation element is designed for use in areas that study expressive and behavioral aspects of body movement, e.g., choreography, physical therapy, etc.

This typestyle is a very fine line design and **must** have a manual velocity control B/M (21-554) installed. This type is designed to be used with 10 pitch only, and requires a 45 ratchet B/M.

Parts Required:

MECH/REF		PART NO.	DESCRIPTION
02	180	1167206	Element – Labanotation

2 **TYPE ELEMENT – ATHABASCAN** (CEM 281) (3/75)

Athabascan is a family of languages used by the Navajo, Apache, Hupa, Sarsi, Tlinget Indians, and some Eskimo dialects.

The Athabascan element uses the English alphabet plus five special symbols and may be used on standard keyboards. A keyboard is available that displays these special characters and diacritical marks. It uses a "dead key" (not field installable) which allows insertion of special symbols without backspacing.

TYPESTYLE	PITCH	PART NUMBER	DESCRIPTION
Courier 12	12	1167217	Athabascan
Courier 72	10	1167218	Athabascan

Keybuttons to match are available as follows:

SYMBOL	POSITION	ACCENT GRAY	CHAR. GRAY
over	32	1133247	1197452
over	36	1133016	1179065
over	38	1259134	1259135
L over l	41	1259481	1259482

3 **TYPE ELEMENT – ORATOR LANGUAGE ARTS** (CEM 347) (■/77)

A new Orator language arts element has been announced for use in the elementary education language arts programs. The Orator L/A typestyle includes the present Orator uppercase letter forms combined with newly designed compatible lowercase letter forms. Also, the character set includes five pronunciation symbols used in elementary education language arts programs (Figure 1).

The 236 language arts keyboard has two dead key positions located in positions 41 and 43.

APPLICATION: This element is not recommended for use with correctable film ribbon. It may be used with all other film carbon and fabric ribbons, but for best results, use the Tech III ribbon with smooth surface bond paper (16 to 20 pound weight) and no carbon copies.

Dead Keys

Figure 1

Parts Required:

MECH/REF		PART NO.	DESCRIPTION
02	180	1167236	Orator Language Arts Type Element

BACKSPACE

4 **CAM PAWL WEAR – SPACE/BACKSPACE** (10/66)

Sound Test: Hold the carrier and operate repeat backspace. Worn pawls will slip on the cam ratchet and can be heard immediately.

5 **LATCH SPRING INSTALLATION** (1/74)

Backspace-Spacebar Latch Spring: New style backspace-spacebar latch springs (P/N 1174058) must be installed with the body of the spring up to prevent the spring from breaking or slipping off the interposer.

Install Spring As Shown

6 **PAWL REPLACEMENT PROCEDURE** (10/66)

Backspace-Escapement Pawl Replacement Procedure: Here is a quick well-controlled way of removing and replacing the backspace and escapement pawl.

1. Center the carrier between two feed roll arms to access to pawl mounting stud nut. Remove the nut.
2. Push pawl mounting stud down to just clear the escapement bracket.
3. Remove the tab lever spring, and tab trigger spring.
4. Lift out the tab trigger, tab lever and spacebar.
5. Remove escapement pawl spring and backspace pawl spring.
6. Move the carrier to the right.
7. The backspace pawl, escapement pawl and spacer will remain on the mounting stud. The mounting stud collar will rest on the escapement torque bar. Just pick them up.

To replace, reverse this procedure.

NOTE: Installation of the escapement and backspace pawls and spacer will be much easier if the two pawls and spacer are assembled and held with a rubber band. Then the three parts can be installed as a single unit and the rubber band cut away.

7 **PITCH CHANGE CABLE ROUTING** (CEM 212) (8/73)

Backspace Pitch Change Cable Routing – Dual Pitch: The pitch change cable must not touch the motor to meet double insulation standards. Route cable as shown.

Pitch Change Cable

Copy Control Shaft

Motor

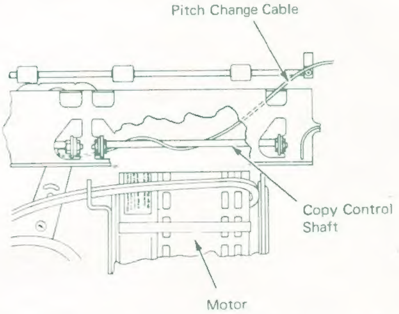
-3-

Item Sample

A B C D

7 **PITCH CHANGE CABLE ROUTING** (CEM 212) (8/73)

Backspace Pitch Change Cable Routing – Dual Pitch: The pitch change cable must not touch the motor to meet double insulation standards. Route cable as shown.



A. **Item Number:** This number corresponds to the number shown in the TII and is used to locate the information. The number will appear in a CEM category symbol to indicate the type information contained. (See General Section, "CEM" Category Symbol – Explanation.") On reliability items, an expiration date will be shown. This number will start with "1" on each new page.

B. **Subject.**

C. **CEM Number.** If the information was originally published in a CEM, the number(s) of the CEM(s) will appear in parentheses in this area. If this area is blank, the information was printed in a publication other than a CEM.

D. **Date Published.** This date is the date the information was sent to the field.

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GENERAL TOOLS AND SAFETY

1 CEM CATEGORIES – EXPLANATION (1/76)

The arrangement of Product CEMs has been made easier. Application categories have been removed and the types of engineering changes have been reduced.

Product CEM Categories Are:

A. ⬢ Safety

1. Purpose – The purpose of the safety CEM is to communicate product safety changes to ensure safe operating and service conditions.
2. Coverage – Safety CEMs will apply to all specified equipment.
3. Conditions – Usually, safety changes will be made on a normal service call if the unsafe condition exists. If the need is high (e.g., possible electrical short), the CEM will have a completion date to ensure quick attention.

   Parts and labor will be available at no charge to all customers (Service Agreements, IBM-owned, self-service, competitive service and per call).

   Safety CEMs will indicate an expiration date at the time of publication. Non-Service Agreement accounts will be charged per call for parts and labor after expiration date.

   Safety CEMs will use service codes as assigned.

B. ● Reliability

1. Purpose – The purpose of the Reliability CEM is to communicate additions or substitutions of parts, or a change in adjustment procedure required to bring a machine, component or supply level consistent with quality standards set by IBM and/or meet original functional and service performance specifications.
2. Coverage – This CEM applies to all specified equipment and supplies.
3. Conditions – Reliability CEMs will be applied to equipment when the specified set of failure conditions exists within a specified range. Usually, this CEM will be applied during a normal service call or preventative maintenance visit on Service Agreement and IBM-owned equipment.

   If requested, IBM will provide per call, self-service and competitive service accounts with parts and labor at no charge only if:

   The service call was caused by the malfunction in the CEM and the machine is in the correct serial range,
   or
   While on a call on the same machine, a check for symptoms indicates that a possible failure condition exists.

   Reliability CEMs will indicate an expiration date at the time of publication. Non-Service Agreement accounts will be charged per call for parts and labor after expiration date.

   Reliability CEMs will use service codes as assigned.

C. ■ Service Information

1. The purpose of the Service Information CEM is to:

   Communicate changes in design of parts, or in adjustment procedures which are the result of continuing engineering activity for product improvement.

   Communicate manufacturing changes which improve assembly or manufacture of equipment or supplies, or improve their serviceability.

   Communicate product feature changes designed to extend the capabilities, usefulness, or saleability of the existing product line.

   Communicate service tips, service procedures, tool information, and other information.
2. Coverage – Service Information CEMs will apply to all specified equipment and supplies.
3. Conditions – Usually, action indicated in a Service Information CEM will be performed on a normal service call or preventative maintenance visit.

   Any parts and/or labor, referred to in the Service Information CEMs will be billable to self-service, per call, and competitive service accounts. Applicable service codes will be used on IBM-owned and Service Agreement equipment.

   Service Information CEMs will be deleted as soon as the information is included in a permanent form numbered publication, i.e., parts manual, service manual, tool catalog, etc.

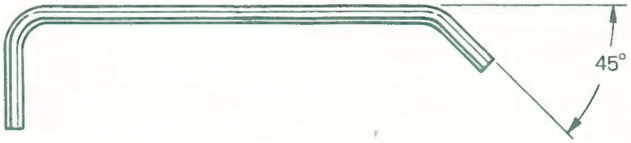
   Service Information CEMs will use any number of warranty or nonwarranty service codes as assigned. Normally, no recovery codes will be used after the new equipment warranty has expired.

PRODUCT CEM INSTALLATION GUIDE

Safety	Reliability	Service Information
Parts and labor available at no charge to ALL customers.	Under certain conditions, parts and labor available at no charge to ALL customers.	Per call to all non-Service Agreement customers. No charge for parts and labor to Service Agreement customers. Install as needed on IBM equipment.
Use assigned service code.	Use assigned service code.	Use applicable service code

2 FRONT FEED ROLL ADJUSTING SCREWS AND CYCLE CLUTCH COLLAR ACCESSIBILITY (1/74)

For easy access to these two adjusting screws, form the no. 10 6-flute bristol wrench (P/N 9900103) as shown in the drawing. The wrench can be formed using a vice.



3 COPPER COLORED SCREWS (10/68)

Copper coloring of screws and/or nuts to indicate a left-hand thread is an industry standard.

4 SMALL LOCKNUTS ONTO ADJUSTABLE BRISTOL SCREWS (10/68)

When replacing locknuts on bristol adjusting screws, first insert the bristol into the head of the adjusting screw. Slide the locknut over the top of the bristol wrench and down onto the bristol screw. The locknut may then be turned onto the bristol screw without the danger of losing it.

5 OPERATIONAL KEYBUTTONS – DAMAGE (CEM 311) (9/76)

It is possible to damage some of the operational keybuttons if the "Selectric" Typewriter is stored on its back. Caution should be exercised if this storing condition is used.

1 SKIRT CLEARANCE ADJUSTMENT – ACCESSIBILITY (CEM 311) (9/76)

The 7/32 - 3/16" wrench, P/N 9900208, may be formed to help access the lower adjusting nut (02-526), which should be loosened to make the skirt clearance adjustment (APM, frame 52).

2 BRITTLE SPLINED WRENCHES, NO. 2, 6 FLUTE (P/N 9900216) (CEM 114) (9/71)

Some splined wrenches have been reported to be brittle due to manufacturing defect. These wrenches may break when torque is applied.

These wrenches can be identified by a light rusty color and have a dry appearance. The replacement wrenches are black in color and have a light oil coating.

3 POWER CLEANER – P/N 9900469 (CEM 90) (1/71)

Under full stalled conditions with power applied, it is possible for the power cleaner, P/N 9900469, to start a fire. This condition must exist for more than five minutes for open flames to result.

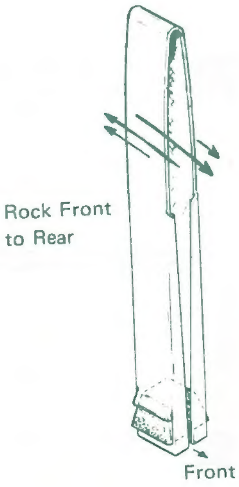
Under no conditions is the power cleaner to be left on unattended or stalled with electrical power applied.

4 KEYBUTTON REMOVAL TOOL USE (10/68)

The keybutton removal tool, P/N 9900373, should be used as shown in the drawing. A drop of oil on the keylever, upright lug, will help in replacing the keybutton.

This should not be done in cases where loose keybuttons are a problem, i.e., automatic letter writing machine, etc.

Attach Druite® paper or similar abrasive paper to the keybutton removal tool to prevent slippage. A contact glue can be used to stick the material to the handle.



APPLICATIONS

5 TYPE ELEMENT – ORATOR (10-68)

The Orator element is designed basically for speech-writing applications. It is recommended for single copy work only because of the size of the characters. Interference printing may occur on single copy work.

This type element is not recommended for manifolding, stencil, offset or spirit masters. It is also not recommended for correcting applications.

6 TYPE ELEMENT – DUAL GOTHIC 72 (10-68)

This typestyle is subject to cutting or embossing and is **not** recommended for use where embossing could be a problem.

7 TYPE ELEMENT – OPTICAL SCANNING, 1428 (10-68)

Machines using the 1428 Optical Scanning type element continuously should have the low velocity vane lug for position No. 42 removed. The "$" used in that position requires high velocity selection, and an inhibitor mechanism was provided for that purpose.

Removal of the No. 42 lug will permit the inhibitor to be removed. Except for the No. 42, all other low velocity positions will operate as designed, providing increased platen life, since punctuation marks will no longer indent the platen surface to cause voids in character coverage.

Removal of the No. 42 lug is performed as follows: Remove the inhibitor selector lever and switch lever. Remove the carrier return keybutton. Lock down the shift keys. Reach through the open area to break off the exposed No. 42 lug with a T-bender or similar tool. Reassemble and check functions. If desired, the low velocity selector lever, link, bellcrank and spring may be removed to remove the need for operator control.

Note: These instructions do **not** apply to machines using the keypunch trainer OCR element, Farrington Scanner element, or 915 element.

8 NEW TYPESTYLES – BOOKFACE ACADEMIC AND PRESTIGE PICA (CEM 178) (9/72)

Two new boldface type elements (Prestige Pica and Bookface Academic) are now available.

These new elements do not have a guide slot and they will not fit on machines manufactured before September 1, 1972.

Existing machines may be changed to accept the new elements by installing a spring biased tilt ring assembly (2-335), P/N 1287435.

The typestyle line weight of these elements is slightly more narrow than that produced by similar typestyles on IBM Typebar models.

Parts Required:

MECH/REF		PART NO.	DESCRIPTION
02	180	1167158	Bookface Academic – 101
	180	1167174	Bookface Academic Accounting
	180	1167123	Prestige Pica – 101
	180	1167172	Prestige Pica Accounting
	180	1167181	Prestige Pica Legal
	180	1167182	Prestige Pica Legal Fraction
	180	1167198	Prestige Pica Puerto Rican

1 TYPE ELEMENT – LABANOTATION (CEM 236) (1/74)

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MECH/REF		PART NO.	DESCRIPTION
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2 TYPE ELEMENT – ATHABASCAN (CEM 281) (3/75)

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A new Orator language arts element has been announced for use in the elementary education language arts programs. The Orator L/A typestyle includes the present Orator uppercase letter forms combined with newly designed compatible lowercase letter forms. Also, the character set includes five pronunciation symbols used in elementary education language arts programs (Figure 1).

The 236 language arts keyboard has two dead key positions located in positions 41 and 43.

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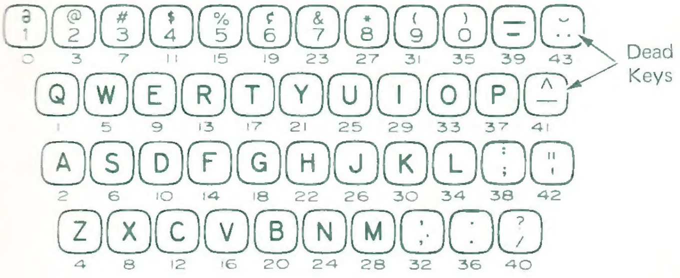


Figure 1

Parts Required:

MECH/REF.		PART NO.	DESCRIPTION
02	180	1167236	Orator Language Arts Type Element

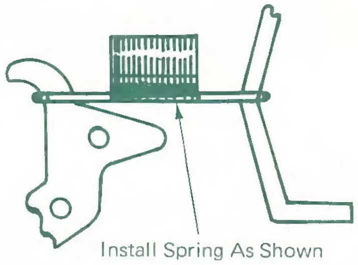
BACKSPACE

4 CAM PAWL WEAR – SPACE/BACKSPACE (10/68)

Sound Test: Hold the carrier and operate repeat backspace. Worn pawls will slip on the cam ratchet and can be heard immediately.

5 LATCH SPRING INSTALLATION (1/74)

Backspace-Spacebar Latch Spring: New style backspace-spacebar latch springs (P/N 1174058) must be installed with the body of the spring up to prevent the spring from breaking or slipping off the interposer.



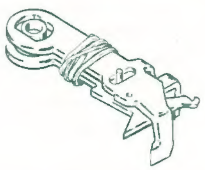
6 PAWL REPLACEMENT PROCEDURE (10/68)

Backspace-Escapement Pawl Replacement Procedure: Here is a quick well-controlled way of removing and replacing the backspace and escapement pawl.

1. Center the carrier between two feed roll arms to access pawl mounting stud nut. Remove the nut.
2. Push pawl mounting stud down to just clear the escapement bracket.
3. Remove the tab lever spring, and tab trigger spring.
4. Lift out the tab trigger, tab lever and spacebar.
5. Remove escapement pawl spring and backspace pawl spring.
6. Move the carrier to the right.
7. The backspace pawl, escapement pawl and spacer will remain on the mounting stud. The mounting stud collar will rest on the escapement torque bar. Just pick them up.

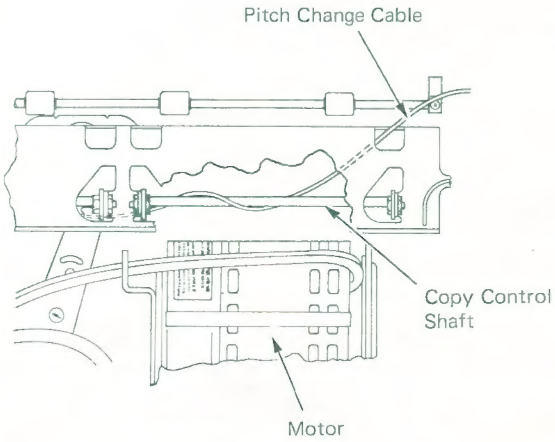
To replace, reverse this procedure.

NOTE: Installation of the escapement and backspace pawls and spacer will be much easier if the two pawls and spacer are assembled and held with a rubber band. Then the three parts can be installed as a single unit and the rubber band cut away.



7 PITCH CHANGE CABLE ROUTING (CEM 212) (8/73)

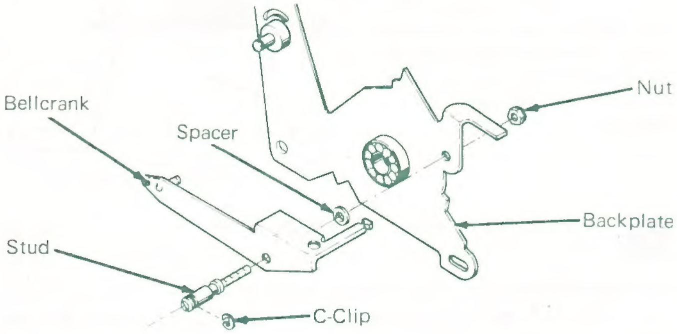
Backspace Pitch Change Cable Placement – Dual Pitch: The pitch change cable must not touch the motor to meet double insulation standards. Place the cable as shown.



1 ROTARY BACKSPACE BELLCRANK STUD (CEM 185) (10/72)

Field Fix: When experiencing backspace failures due to broken bellcrank mounting stud, the following field fix may be used.

1. Remove bellcrank mounting stud from backspace by hitting lightly.
2. Remove grip clip from stud and remove stud from bellcrank.
3. Insert new stud (24-152) (P/N 1115859) in bellcrank with threaded part to rear.
4. Install C-clip on front of stud and washer over threaded end.
5. Install stud through hole in backplate and tighten with nut.



Parts Required:

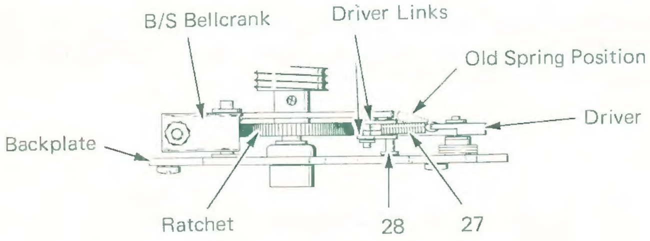
MECH/REF		PART NO.	DESCRIPTION	QTY.
24	152	1115859	Stud	1
	151	1092125	C-Clip (PP no. 3)	1
	153	1117831	Spacer	1
		103372	Nut (PP no. 7)	1

2 ROTARY BACKSPACE DRUM WEAR (CEM 293) (7/75)

Redesigned Parts: To stop excessive wear and breaking of ratchet teeth (24-6) due to incorrect alignment of the driver (24-32).

A redesigned stud and spring are available and can be installed on any "Selectric" rotary backspace mechanism. The stud replaces stud (24-28) and is installed from the rear of the machine through the driver and lower driver link hole. The stud operates against the back plate (24-1). The spring replaces spring (24-27). Install the small loop end of the driver and the long loop end to the driver link mounting stud between the two links (24-29). DO NOT INSTALL THE SPRING IN B/S BELLCRANK HOLE.

Ensure driver to ratchet clearance is .030"-.040" (0,76-1,02mm). Apply a thin film of no. 23 grease on the back plate where the stud contacts.



(Top View)

Parts Required:

MECH/REF		PART NO.	DESCRIPTION	QTY.
24	27	1206990	Spring, Driver	1
	28	1204058	Stud, Driver Link	

Recovery Code Expired 8-15-76

3 BACKSPACE DRUM – SERVICE HINT – ROTARY BACKSPACE (CEM 311) (3/76)

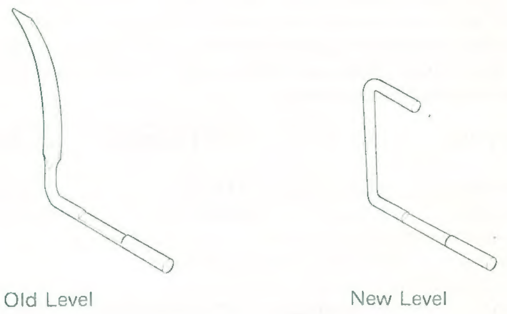
The rotary B/S drum and ratchet asm. (24-6) can be removed through the hole in the bottom of the frame by removing the B/S bellcrank upstop (24-116) and the C/R shoe mounting bracket (03-500). This removes the need to remove the B/S plate (24-1) when changing the ratchet and drum asm. (This procedure will not work on machines manufactured before dual transport system.)

4 INTERLOCK SHAFT (CEM 202) (4/73)

Redesigned – "Selectric" II: The index to backspace interlock shaft (24-20) for dual pitch "Selectric" II typewriters has been redesigned to remove a binding condition.

An index during a normal backspace operation will occur when interlock fails to operate.

Replace the interlock with new level part. Part number remains the same.



5 DRIVE LINK SPACER (CEM 188) (11/72)

Drive Link Spacer – Removed – Dual Pitch: Drive link spacer (24-33) has been removed to prevent a bind between the backspace bellcrank and the driver links. If this condition is present, remove the spacer.

CARRIER & ROCKER

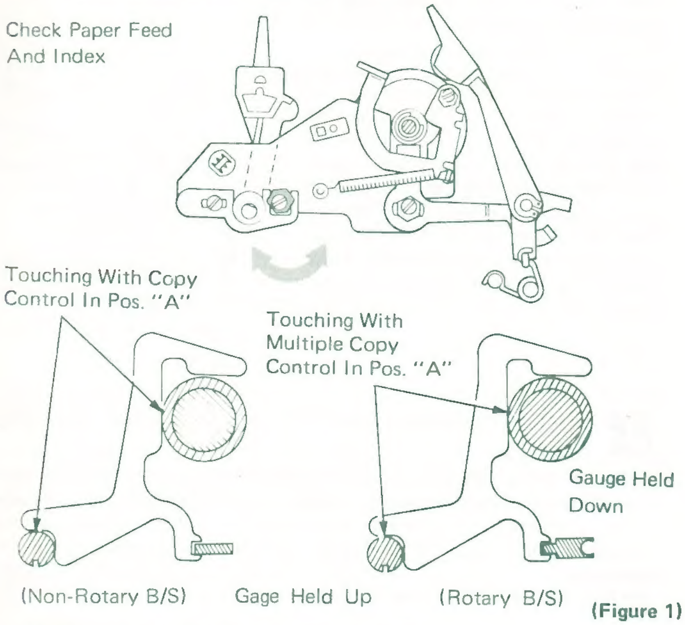
1 PRINT QUALITY (CEM 304) (11/75)

Use the following procedure when experiencing overinking and/or fill-in using correctable film ribbon.

This condition can be reduced by making the following checks and adjustments:

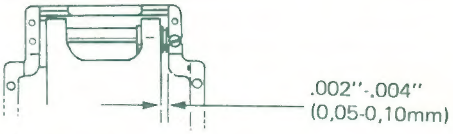
a. Check the application! For best results, use a 16-20 lb. (60-75 g/sq. m) smooth surface original with less than three copies.

b. Adjustments:
   1. Platen front-to-rear (Fig. 1).


Check Paper Feed And Index
Touching With Copy Control In Pos. "A"
Touching With Multiple Copy Control In Pos. "A"
Gauge Held Down
(Non-Rotary B/S)
Gage Held Up
(Rotary B/S)

(Figure 1)

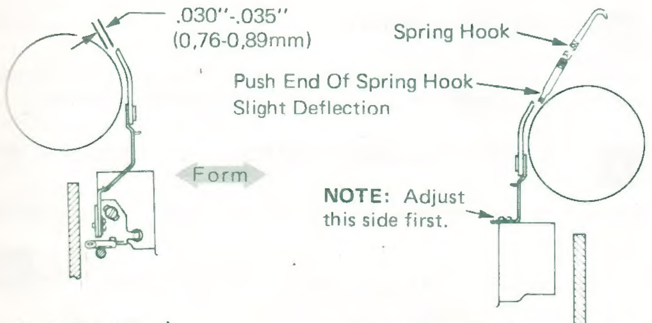
   2. Platen height — Even top and bottom
   3. All rotate and tilt homing adjustments
   4. Rocker shaft end play (Fig. 2)



(Top View)

(Figure 2)

   5. Rotate and tilt detents — Minimum side play, no binds
   6. Cardholder — (Note: These clearances should only be used to correct machines experiencing fill-in with the correctable film. The previous adjustment applies to all other machines. See Fig. 3.)

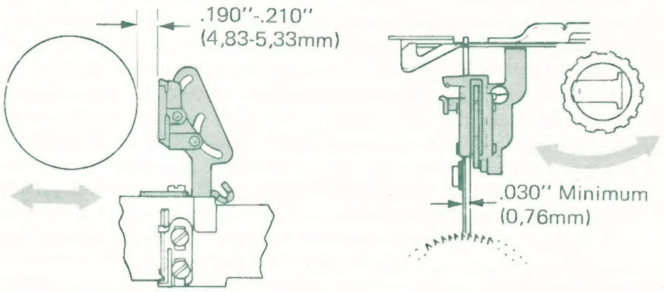


(Left Side View) **(Right Side View)**

(Figure 3)

NOTE: Ensure cardholder is .030"-.035" (0,76-0,89mm) at writing line.

   7. LH ribbon lift guide (Fig. 4)



(Left Side View) **(Top View)**

(Figure 4)

   8. Escapement timing — escapes just after print.

c. If the application is not recommended for use with the correctable film ribbon, and the above adjustments do not produce desired results, suggest Tech III cover-up.

2 PRINT QUALITY (10/68)

When print smearing occurs, a possible cause could be a defective detent cam follower (02-501). Check for the following:

1. Follower bracket adjustment. The bracket should be parallel with the print sleeve. The cam follower lug should be .005" (0,13mm) from the print sleeve. With the Hooverometer on the detent cam, the height of the follower should be adjusted so the top of the upper part of the lug is in line with the No. 1 scribe line.
2. The front-to-rear motion of the follower should be no more than the thickness of the detent actuating lever. Excessive play in the stud will change the detent timing and cause smearing.

If an out-of-parallel or excessive play condition is found, replace the follower. Pay particular attention to making the correct adjustments.

Other areas to check include powered and free flight, platen position, and timing of the shafts.

3 IMPRESSION VARIATIONS (10/68)

It is possible to get higher than normal impression if the print cam follower slips off the low velocity cam during a print cycle. Proper DI cable adjustments will prevent this from happening.

4 IMPRESSION VARIATIONS — BROKEN PRINT CAM FOLLOWER (10/68)

Uneven, blurred impression and uneven, smeared underscore may result from a broken print cam follower. (Follower roller mounting pin breaks on LH side.)

5 ALIGNMENT AND IMPRESSION VARIATIONS (10/68)

The following adjustments should be checked when having alignment and/or impression problems. Follow the sequence exactly to ensure previously set adjustments are not changed.

1. Upper ball socket fit in the bore of the tilt ring. If it appears to be in excess of .002" (0,05mm) on a problem machine, the tilt ring assembly should be replaced.
2. Fit of the upper ball socket between its flange and the tilt ring spacer. If up and down motion can be observed, the shims are too large. A stone may be used to reduce their thickness.
3. Tilt detent sideplay. Adjust the detent pivot and the detent guide screws for no sideplay without binding.
4. Tilt ring sideplay and homing. No sideplay — no binds and proper tilt homing.

(Continued On Next Page)

5. Rotate detent sideplay. Both the rear and front guides should have no sideplay – no binds.
6. Detent cam and cam follower. If either part is worn or maladjusted, it can cause the tilt detent to bounce under powered operation resulting in alignment and/or impression differences. Position the detent cam follower bracket front-to-rear for a clearance of .005"-.015" (0,13-0,38mm) between the follower pin and the print sleeve. Maintain the adjustment as close as possible to the .005" (0,13mm) side of the tolerance. (Make sure the pin will not jam in the print sleeve keyway and that the bracket is parallel to the print sleeve.) In addition to the front-to-rear adjustment, the vertical adjustment is equally important. The brackets should be adjusted up or down to align with the no. 1 scribe line of the Hooverometer as it rests on the detent cam. Adjust the detent cam left-to-right for .001" (0,03mm) motion of the follower (machine half-cycled) and the actuating lever height for proper skirt clearance.
7. Rear carrier shoe. Ensure that the carrier has the silver colored adjustable shoe or the current non-adjustable shoe.
8. Rear carrier shoe clearance. Minimum – no binds.
9. Carrier shoe clearance. Minimum – no binds.
10. Gear train backlash. Must be checked at several points during a cycle. On 713-23 and 715-25s, the upper idler gear should have enough backlash to allow for the slight bending of the print shaft when the carrier is printing near the center of the platen. Check for backlash while applying some upward pressure on the centered carrier.
11. Check for proper end play of the cycle shaft and the operational shaft.
12. Cycle clutch adjustments. Poor adjustments of the drive or restoring cam overthrow can produce variations in the drive which affect fine timing. A worn cycle clutch spring could also produce the same results.
13. Homing and bandwidth. Normally, this is only considered in connection with horizontal alignment, but the impression could be the FIRST thing affected.
14. Print shaft timing. Slight contact as detent comes out of tooth.
15. Check proper shifting of the dual impression roller on the print cam. (This can be checked by manually holding the dual impression follower or latch in one velocity position while making a strike-up.) Adjust the print cam follower stop screw for .020" (0,51mm) between the follower roller and the print cam. If the print cam follower is too close, the follower roller may bounce from the first low dwell to the second low dwell.
16. Platen position. Adjust the platen with platen gauge, P/N 9900519, both vertical and horizontal. Readjust the vertical position for even color density on top and bottom of characters. It is important that the platen be parallel to the print shaft.
17. Yoke position. The "H" and "M" should be used to determine the proper position of the yoke. If this adjustment is changed, it will be necessary to check typehead homing and skirt clearance.
18. Free flight and power travel. With the impression control set at position 4, .260"-.270" (6,60-6,86mm) (foot of Hoovermeter plus 2 or 3 tab cards) should exist between the platen and the letter "Z." Free flight should be adjusted for .030"-.035" (0,76-0,89mm).
19. Cardholder. Adjust for .005-.015" (0,13-0,38mm) clearance of the platen.

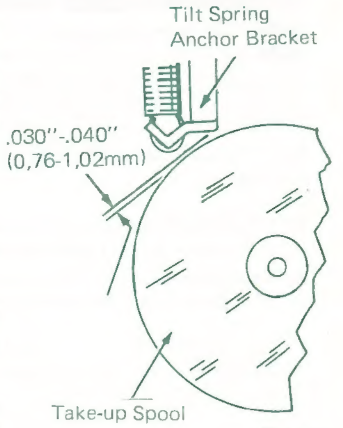
Other possible causes that affect print quality:

Rocker shaft end play
Worn print sleeve and/or key
Print escapement timing
Bind in rotate system
Interference between tilt pulley spring anchor and ribbon plate or take-up spool
Burred print shaft
Broken print cam follower
Drive belt tension

1 SKIRT CLEARANCE – LOSS OF (10/68)

End play of the print sleeve should be checked before adjusting a "Selectric" Typewriter for proper skirt clearance. It has been found that some carrier bearings may have burrs on their sides which, when worn off, can allow excessive end play in the print sleeve. This excessive end play allows the detent cam to move to the right, and results in less skirt clearance.

2 LIGHT CHARACTERS – FABRIC AND FILM RIBBON (10/68)

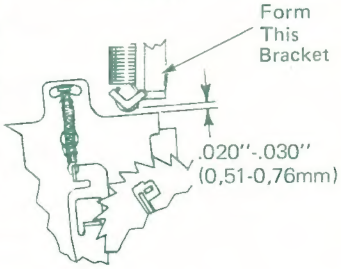


On some machines using the film ribbon mechanism, interference between the tilt spring anchor bracket and the ribbon take-up spool flange has been experienced. The symptoms of this interference may be:

1. Broken tilt or rotate tape.
2. Differences in print quality.
3. Damage to the ribbon take-up spool.

This problem may be corrected by forming the spring anchor bracket to the rear to clear the take-up spool.

Intermittent light characters on fabric ribbon machines may be caused by interference between the tilt pulley bellcrank spring anchor and the ribbon feed and reverse plate when the plate is positioned to feed the right-hand spool. This interference occurs just before print. Form the spring anchor to provide enough clearance.



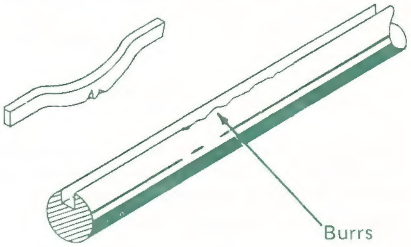
3 TILT 3 CHARACTERS TOO LOW (CEM 222) (10/73)

Some machines may have reached the field with yokes (02-520) being out of specification. The rotate detent nut (02-410) hits the yoke when a tilt 3 character is selected. If experiencing this problem, remove enough of the yoke at the point of contact to allow proper tilt detenting.

NOTE: The material is soft enough so that a file may be used.

4 PRINT AND ESCAPEMENT FAILURES (10/68)

Burrs on the print shaft can often be caused by a defective or worn key. This condition can cause escapement and/or print differences.



5 YOKE ADJUSTMENT (10/68)

When adjusting a "Selectric" Typewriter to satisfy a critical impression condition, rotational adjustment of the yoke may be necessary.

6 ROTATE ALIGNMENT CHANGES (CEM 195) (3/73)

When it is hard to make and/or maintain coarse rotate alignment, check:

1. Key for bottoming out in rotate pulley before tightening on lower ball socket (change key) (02-422).
2. Loose pin in lower ball socket (02-415).
3. Setscrew in rotate pulley hitting against lower ball socket shaft instead of key (change rotate pulley) (02-420).
4. Excessive head play caused by too much slot width of ball joint (02-414).
5. Wear in the lower ball socket in the yoke (02-520).

1 EXCESSIVE HEAD PLAY (CEM 223) (10/73)

If experiencing excessive head play, this may be caused by contaminated ball joints (02-414).

Replace the ball joint, lower ball socket, tilt ring and tilt ring pins (bullets).

NOTE: The IPE Model 224 backspace tool (P/N 9900369) can also be used to adjust the tilt detent setscrews by holding the nut with the backspace tool and inserting a no. 2, 6-fluted wrench through the B/S wrench into the setscrew.

Recovery Code
Expired 5-1-76

2 TILT RING SHIM CENTERING – 40 SECONDS (10/68)

1. Slightly loosen the screws which hold the tilt ring spacer.
2. Insert the 6-fluted, no. 6 bristol wrench (used for print shaft gear) into the notch and run it completely around the ball socket. It should pass without binding at any point.
3. With the wrench at the front, tighten the front screw; with the wrench at the rear, tighten the rear screw.

This technique does a better job of centering than the old way using the typing element.

3 TILT RING REMOVAL (10/68)

To make tilt ring removal easier, half-cycle the machine to a 2-tilt position. This will position the tilt ring almost level and allow the tilt detent to move up, making it easier to slide the rotate detent out.

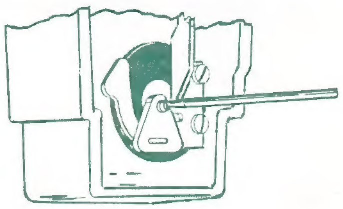
4 LOWER BALL SOCKET REMOVAL (10/68)

1. Half-cycle the letter "T."
2. Remove tilt ring.
3. Loosen rotate pulley setscrew.
4. Use handle of small springhook as a follower and remove lower ball socket.

To replace, reverse the procedure and center the tilt ring between the posts of the yoke.

NOTE: An easy method of loosening the rotate pulley from the lower ball socket after loosening the setscrew (02-421) is to lightly hit a screwdriver placed on the lower end of the ball socket (02-415).

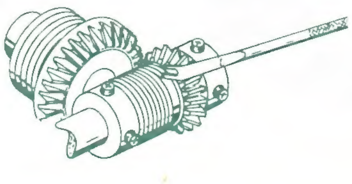
5 ROTATE PULLEY SETSCREWS STIRPPED – SERVICE TIP (10/68)



The lower ball socket can be removed if the rotate pulley setscrew is stripped in the pulley by removing the tilt ring assembly and by taking a fulcrum wire and lightly hitting the lower ball socket out through the top of the yoke. Remove the rotate spring and take the pulley out of the bottom of the carrier.

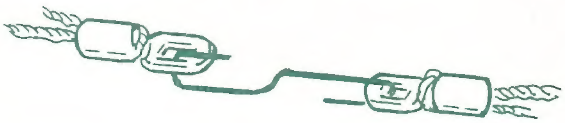
6 MOVING CARRIER WITH MACHINE HALF-CYCLED (10/68)

The carrier can be moved with the machine half-cycled without changing the half-cycle position. To do this, push the tip of the RH loop of the tab governor spring toward the rear after latching out the tab lever. This will allow the carrier to move to the right.



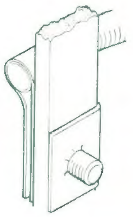
7 CARRIER REPLACEMENT – SERVICE TIP (CEM 311) (3/76)

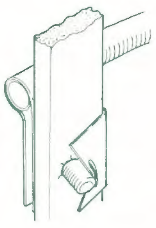
A paper clip can be used to hook the C/R and tab cords together when replacing the carrier on the "Selectric" Typewriter. This keeps the cords out of the way during carrier replacement and helps to reinstall them.



8 DUAL VELOCITY CLIP – INSTALLED WRONG (CEM 209) (6/73)

Some "Selectric" typewriters may have the dual velocity cable clip (02-214) incorrectly mounted on the carrier. The screw may be at an angle and not in the threaded part of the clip. If experiencing problems with dual velocity, check this screw. The screw should be removed and properly reinstalled.



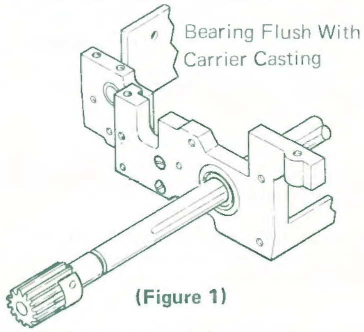


9 CORRECIING TAPE LIFT – LOST MOTION (CEM 315) (4/76)

If all adjustments are correct, but still unable to get enough tape lift motion for proper correction or lift guides stick in lift position, check the left-hand carrier bearing.

Remove left-hand wiper retainer (02-48) and wiper (02-50); check left-hand carrier bearing. Bearing should be flush with the carrier casting. If bearing extends out of the casting, it is possible for the lift cam follower to slip off the lift cam. Use the following procedure to correct this condition.

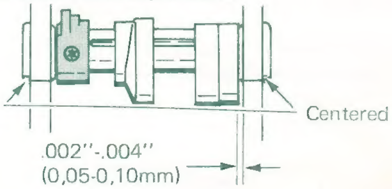
1. Move carrier to the far right position.
2. Remove print shaft gear (02-40) and retainer (02-51). Slide the print shaft to the right until it clears the left side of power frame; then remove wiper (02-50) and retainer (02-48); turn pivot shaft gear around (Fig. 1); install on print shaft and tighten both screws (02-41).
3. Loosen ribbon lift cam screw (26-112) and print cam screw (02-203).
4. Use print shaft gear to drive bearing into carrier casting by sliding the print shaft to the right. Repeat this until the bearing is driven flush with left side of the carrier casting.
   CAUTION: Do not apply too much force as this may drive the bearing in too far (Fig. 1).



(Figure 1)

NOTE: This procedure will work only if the bearing was not fully inserted in the carrier casting. If the bearing is loose (oversized casting hole), the bearing will not stay in position if reinserted and carrier replacement is recommended. This procedure does not apply to the early level (smooth outer diameter) carrier bearings.

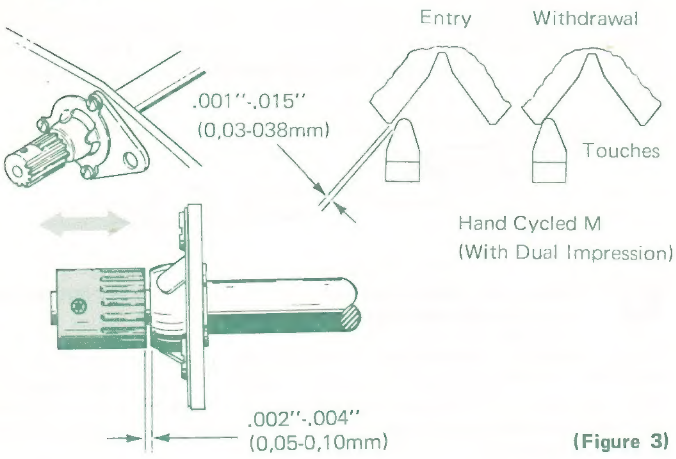
5. Adjust the ribbon lift cam and print cam (Fig. 2).
   NOTE: Check detent cam adjustment.



(Figure 2)

(Continued On Next Page)

6. Replace all parts and adjust print shaft end play and fine timing (Fig. 3).



(Figure 3)

1 TYPE ELEMENT — ALIGNMENT CHECK (10/68)

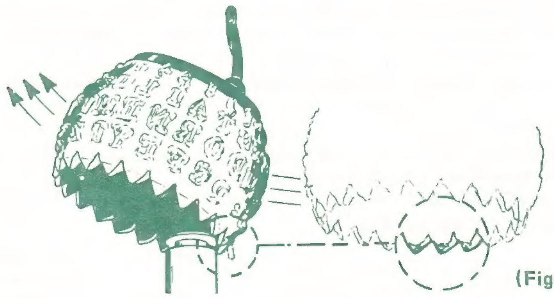
Type the word CHROMEX in both upper and lowercase to make sure that all slides (character sections) in any U.S. correspondence typing element are correctly positioned. This information should be of value at the time of installing a new typing element or in diagnosing a malselection.

2 TYPE ELEMENT BREAKAGE — BALL SOCKET AREA (10/68)

Care should be taken not to increase the print cam drive beyond .260'' (6,6mm). Impression increased above .260'' (6,6mm) can cause breakage of the type element in the area that fits over the upper ball socket.

3 TYPE ELEMENT BREAKAGE — TEETH (CEM 329) (12/76)

Broken teeth in the area of the lever pivot can be caused by not fully detenting the lever before the element is lifted off the tilt ring. As the type element is lifted, the lever spring rotates the element (Fig. 1) and the teeth strike the upper ball socket. This could break a tooth in the area of the hyphen (-) or the uppercase "G."



(Figure 1)

All operators should be instructed to detent the lever in the open position before lifting the element.

4 UNDERPRINTING — BOOKFACE ACADEMIC AND PRESTIGE PICA (CEM 192) (1/73)

A dot appears on the typed page below the capital and lowercase "t" and cannot be adjusted out. This is caused by the fractions being too large.

Replace type element with new one. The fractions on elements manufactured after October 2, 1972 are smaller. This applies only to the listed typestyles. Part numbers remain the same.

Type Elements

1167158	Bookface Academic — 101
1167123	Prestige Pica — 101
1167182	Prestige Pica Legal Fraction

Recovery Code
Expired 1-31-74

5 TYPE ELEMENT DAMAGE — MALADJUSTMENT (10/68)

On "Selectric" typewriters equipped with the new fabric ribbon mechanism, it is important to guard against EXCESSIVE increase of type element motion.

As the total distance (head-to-platen) gets near .300'' (7,62mm), the type element rests closer to the ribbon feed plate. During character selection, the top of the ribbon feed lever (13073) can come in contact with the type element teeth or with character faces in the tilt 3 band. This can cause damaged type face or broken teeth.

The above condition should be kept in mind when a particular application (e.g., stencils) requires increased velocity. Do not maladjust.

6 TYPE ELEMENT DAMAGE — PLATING (10/68)

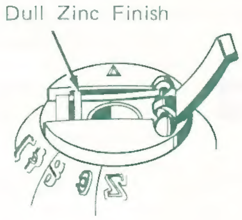
Type Element — Plating Damage (02-180): Excessive heat can cause "bubbling and blistering" of type element plating. Storage areas for "Selectric" Typewriter elements must be selected with care. Elements which are heated above 140° F. (60° C.)may be damaged. Areas of exposure:

1. Automobile trunks and the area near the windshield or rear window during the summer.
2. Near a heating outlet or steam radiator.
3. In the CE service case near the power cleaner.
4. Machines used in an enclosure.

7 LATCH SPRING BREAKAGE — TYPE ELEMENT (CEM 76) (11/70)

Latch springs may break on some type elements manufactured between June 20 and September 29, 1970.

Type elements with a dull zinc finish latch spring may have this problem. Type element springs with a bright nickel finish are not subject to breakage.



Some problems which can be caused by a broken latch spring are:

1. Element cannot be removed by the operator.
2. Print quality (alignment or impression) may be affected.
3. Uneven underscore.

Recovery Code
Expired 11-4-71

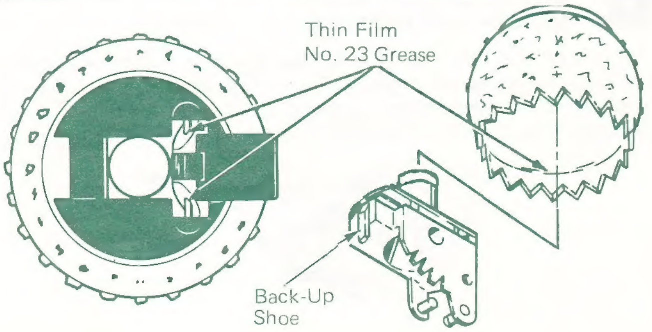
8 TYPE ELEMENT LUBRICATION (CEM 156) (4/72)

Every element should be lubricated with a light film of no. 23 grease in two areas.

1. Lever camming surface.
2. Inner surface that is contacted by the tilt ring back-up shoe — only on "Selectric" Typewriter and I/O.

If an element lever should bind shut, a drop of oil at each of the lever pivot points will remove the bind.

Since some customers clean their elements in a way that removes all lubrication, check each typehead on inspections. Operators should be instructed NOT to wash their elements as this removes the lubrication.



CARRIER RETURN

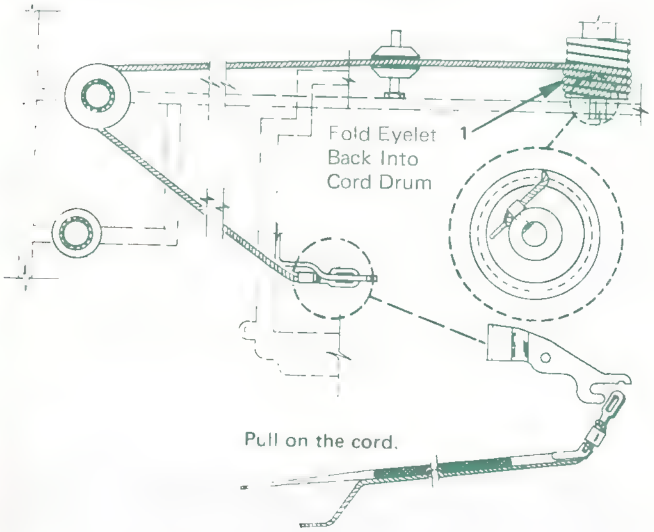
1 CORD WEAR – CARRIER RETURN (10/68)

Some carrier return cord wear may be caused by the rotate tape contacting the cord between the left-hand front and rear cord pulleys. If this condition is found, place washer, P/N 1090790, under the left-hand front cord pulley (03-336) to allow enough clearance between the cord and the rotate tape.

2 CORD REPLACEMENT PROCEDURE (10/68) (CEM 95) (2/71)

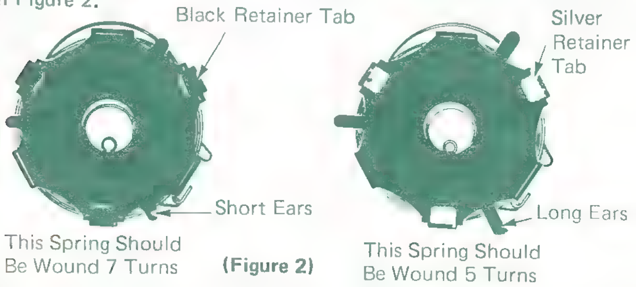
The following cord replacement technique has some advantages over methods in previous publications. The procedure described below uses most of the advantages of all previous procedures.

1. Remove both cords and hand cycle the machine until the mainspring tension is removed.
2. Disconnect the carrier return unlatching link.



(Figure 1)

3. Manually latch the carrier return mechanism and rotate the turning wheel (while counting the revolutions of the escapement shaft) until the mainspring is wound the proper number of turns as shown in Figure 2.

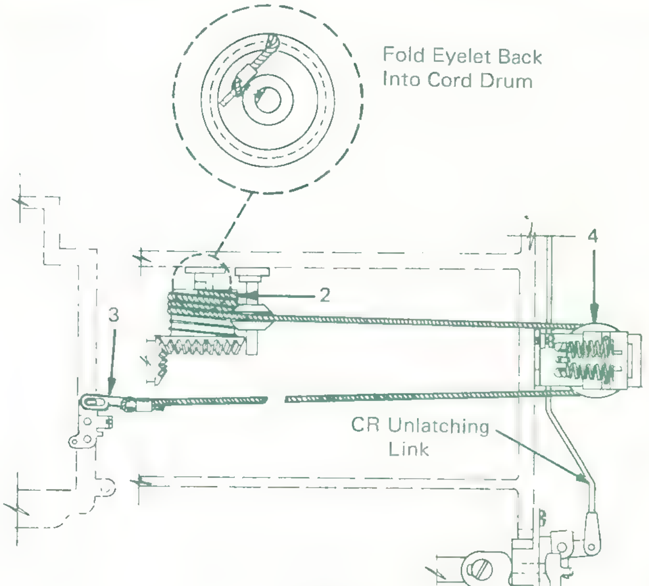


Black Retainer Tab
Silver Retainer Tab
Short Ears
Long Ears
This Spring Should Be Wound 7 Turns
This Spring Should Be Wound 5 Turns

(Figure 2)

4. With the carrier to the right, feed the carrier return cord around the large pulley and connect it to the cord drum (Fig. 1, No. 1) and carrier.

   Connect the carrier return cord using scissors clamps or the pusher end of a springhook as shown in Fig. 1.
5. Hold the slack out of the carrier return cord and rotate the turning wheel until the carrier gets near the left sideframe. Stop hand cycling when the notch in the escapement cord drum is visible.
6. Connect the escapement cord to the drum and wrap approximately one turn *(two turns for 7X3) of the cord around the drum (Fig. 3, No. 2).
7. Thread the cord around the cord tension pulley (Fig. 3, No. 4) and connect it to the carrier (Fig. 3, No. 3).

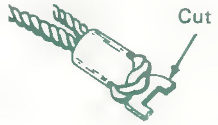


(Figure 3)

8. Pull the carrier return cord over the left-hand front pulley and connect the unlatching link.

*NOTE:

1. By using cord anchor (P/N 1175578) a longer cord can be cut to the proper length.
2. When using the premeasured cords (white), one anchor lug can be cut for easy installation in the cord drum slot. After cutting the cord lug, check for burrs on the lug. If necessary, remove the sharp edges with a file.

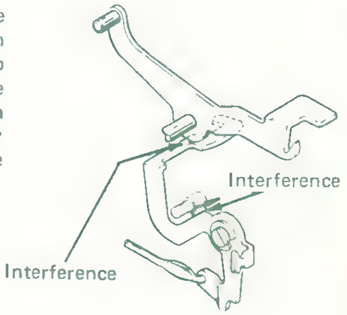


3 EXCESSIVE SHOE CLEARANCE (CEM 241) (1/74)

When carrier return failures are caused by excessive shoe clearance, check that the clip (03-507) is fully bottomed on the actuating arm (03-508) before readjusting.

4 PARTIAL CARRIER RETURN – TORQUE BAR CLIP (10/68)

Partial carrier return can be caused by the rotational position of the escapement torque bar clip (06-33), allowing it to interfere with the carrier return keeper. In some cases the latch keeper may bind off on the bottom of the detent arm (20-460).



5 LATCH OVERTHROW (CEM 60) (7/70)

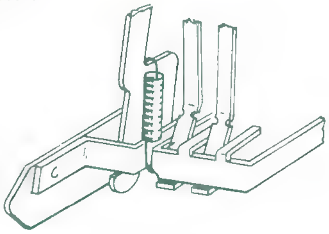
To ensure proper overthrow, install platen in machine when checking or making the carrier return latch overthrow adjustment.

1 PARTIAL CARRIER RETURN (10/68) (CEM 311) (3/76)

Complete carrier return failures and some partial return failures can sometimes be traced to operation of spacebar and return at the same time (e.g., at the end of a typed line).

The condition occurs because the spacebar cam follower operates the interposer restoring bail before the C/R operational latch can be positioned under the index cam follower.

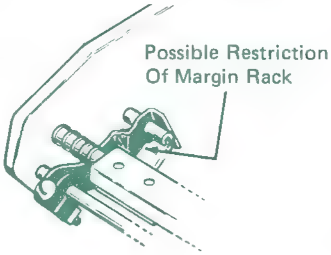
This condition can be adjusted by cutting spring (P/N 0190341) to 3/4" (19,05mm) length. Next, form each end as shown and install it between the C/R operational latch and the rear bottom edge of the spacebar cam follower.



The spring should loosely span the distance between parts at rest, and should not interfere with vertical line spacing.

2 UNLATCHING FAILURES (10/68)

Failure to unlatch the carrier return can sometimes be caused by the RH margin release lever (09-67) and the LH margin release lever (09-64) not being adjusted properly. It is possible to block the margin rack movement to the left. If the 7X1 keylever is bent, it could also give the same problem.



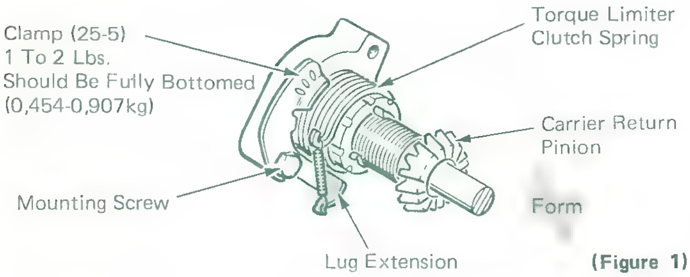
3 SLOW OR UNEVEN RETURN (1/74)

If experiencing slow or uneven carrier return on earlier level "Selectric" typewriters with the cast carrier return lever (03-41), ensure that the setscrew (03-409) is tight. The setscrew can loosen slowly causing hard-to-diagnose problems.

4 SLOW OR UNEVEN RETURN (CEM 308) (1/76)

When experiencing slow or uneven C/R and normal adjustments (2 to 3 loop C/R shoe overlap and .015"-.020" [0,38-0,51mm] shoe clearance), do not correct the condition; replace pinion gear (25-14). Some gears may not have the proper surface finish. Correct gears can be identified by a dull, dusty gray appearance over their whole surface. If slow or uneven condition exists after changing the pinion gear, the C/R actuating arm should be replaced with new level arm (CEM 316).

The torque limiter adjustment should be adjusted to the high side of the 1 to 2 lb. (0,454-0,907kg) specification. Check the clamp (25-5) to ensure its mounting screw (25-8) is right and the clamp is fully bottomed on the clutch spring (25-9) (Fig. 1).



(Figure 1)

CAUTION: The spring lug extension may hit the carrier return shoe arm or the print interlock link when in full overthrow position. Form the tip of the spring lug down over the loop of the spring.

Recovery Code Expired 10-30-76

5 PAWL CLEARANCE – LOSS OF (CEM 88) (1/71)

If experiencing a problem maintaining carrier return pawl clearance, check the escapement pawl mounting stud for wear at the point that contacts the escapement torque bar.

6 PAWL CLEARANCE – ADJUSTMENT TIP (10/68)

With the machine turned off, slowly depress the carrier return latch by hand. Pawls should be removed from their racks as the bottom of the latch is even with the latch keeper surface. This provides correct pawl clearance (.005"-.015") (0,13-0,38mm).

7 SCRAPING NOISE ON RETURN – ESCAPEMENT TORQUE BAR (10/68)

There are some cases where the lugs of the escapement and backspace pawls have burrs on them allowing the pawls to scratch into the escapement torque bar, moving it to the left and/or causing noise during carrier return. The pawls should be replaced or the lugs polished to stop the noise condition. A Model C feed roll clip on the left end of the torque bar inside the frame works well to prevent movement.

There are cases where the escapement torque bar is not parallel to the print shaft. This can be checked by observing the .001"-.002" (0,03-0,05mm) clearance between the escapement torque bar and pawl mounting stud on the left, then the right side of the machine. The dowel pin can be removed from the mounting plate (06-54) to move the plate front-to-rear for proper adjustment.

8 KEYLEVER PAWL OVERLAPPING CARRIER RETURN – INDEX (10/68)

On some early machines the carrier return keylever pawl may become overlapped with the index keylever pawl, thus making the carrier return inoperative. To prevent this, a shim (P/N 1077799, Parts Packet No. 8) may be used to limit the downward travel of the carrier return keylever. Place the shim under the RH keylever guide comb screw and adjust so the C/R keylever just moves far enough to repeat.

CORRECTING

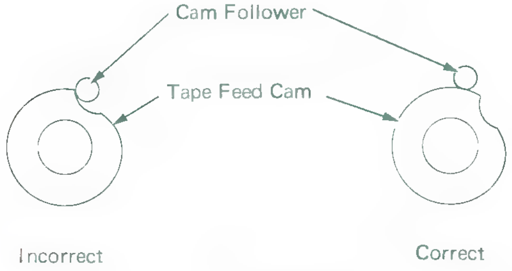
1 CORRECTING MECHANISM OPERATION FAILURE (CEM 210) (7/73)

If the correction mechanism fails to operate when the correcting key is depressed, check "tape feed cam follower front lug" adjustment. Make this adjustment with the machine at rest and the print shaft rotated top-to-rear as far as possible. If this adjustment is not correct, it may cause a bind between the feed cam follower (26-45) and the feed cam inhibitor (26-53) which will prevent the feed mechanism from activating.

2 CARRIER BINDS TAB OR SPACEBAR (CEM 210) (7/73)

Carrier binds during tab or spacebar operations may be caused by tape feed cam follower positioned just off the high dwell of the feed cam (Fig. 1). Cam follower position should be observed with the machine at rest and the print shaft rotated top-to-rear as far as possible. Binds are caused by rotational pressure on the right end of the print sleeve key against the keyway. Fine adjust rotate homing and timing. If this does not correct this condition, replace the tape feed cam (26-50).

NOTE: Gear train backlash and cycle clutch overthrow must be correct.



(Left Side View) **(Figure 1)**

3 TAPE FEED CAM REDESIGNED (CEM 247) (3/74)

The correcting tape feed cam has been redesigned to provide a longer dwell on high point of cam (26-50) to prevent follower roller (26-45) from falling into notch of cam.

Symptom: Carrier binds during tab or spacebar.

Solution: If normal adjustments will not correct, replace old level cam (26-50) with new level.

Parts Required:

MECH/REF.	PART NO.	DESCRIPTION	QTY.
26 50	1464823	Cam, Tape Feed	1

Machines Affected: Above S/N 8X5 2322160 and 8X3 1241822.

Recovery Code
Expired 3-15-75

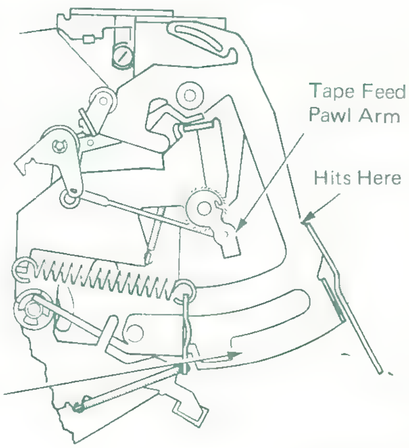
4 CORRECTION TAPE – CONTINUOUS FEED (CEM 237) (1/74)

Some machines may have reached the field with a soft stud that mounts the roller on the tape feed follower (26-45). This will cause loss of traction and will not allow the follower to latch up. This will result in continuous tape feed. If this occurs and normal adjustments will not correct it, the follower bracket (26-45) should be replaced.

Recovery Code
Expired 2-1-75

5 CORRECTION TAPE – INTERMITTENT FEED FAILURES (CEM 210) (7/73)

Intermittent correction tape feed failures may be caused by the tape load lever (26-15) hitting the tape feed pawl arm (26-4). This may be corrected by forming the tape load lever (Figure 2).



(Figure 2)

6 INCOMPLETE CORRECTION (CEM 210) (7/73)

Traces of the incorrect character remaining following a correction operation may be caused by the tape feed cam inhibitor (26-53) not functioning. The cam follower should not be on the tape feed cam when the element is moving toward the platen.

7 TAPE FEED FAILURES – LIFT-OFF TAPE (CEM 242) (1/74)

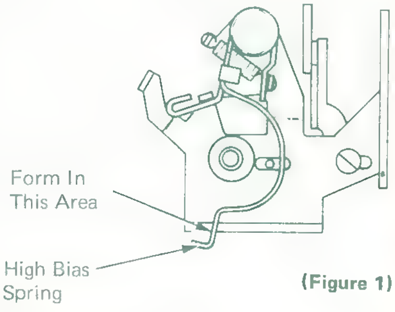
If experiencing lift-off tape feed failures, check the base of the take-up spool for a binding condition with the swing arm (26-30). If a bind exists, the spiked wheel (26-006) will be cammed off the tape.

Solution: Replace the lift-off tape.

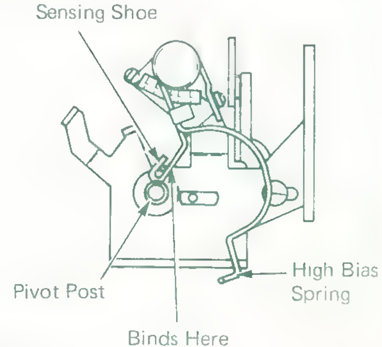
8 CRADLE ASSEMBLY BINDS (CEM 197) (3/73)

Spooling off of the IBM Tech III coverup tape and/or interference between the ribbon and either of the correcting tapes may cause damage to the ribbon. This can cause voids due to the ribbon folding or due to the correcting tapes removing ink from the ribbon.

1. The high bias spring may be preventing the tape supply ratchet from returning to rest. This condition is corrected by forming the high bias spring to slightly open the angle at the tip (Figure 1).
2. When the high bias spring is manually rotated too far counterclockwise, the sensing shoe may bind on the base of the supply ratchet pivot post (Figure 2). This leaves the high bias spring disengaged from the supply ratchet. To correct, replace the tape supply cradle assembly (26-34).



(Figure 1)



(Figure 2)

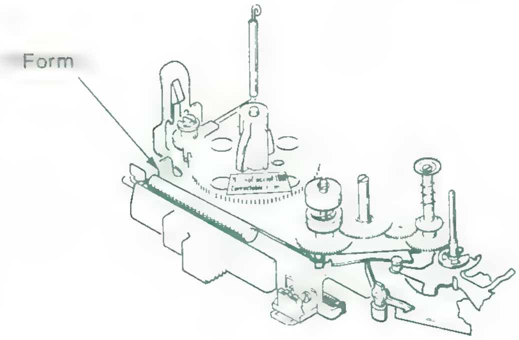
Recovery Code
Expired 3-7-73

1 CORRECTING RIBBON – FOLDING (CEM 226) (10/73)

Folding And Winding Around Spike Driver: A folding condition occurs as the ribbon enters the take-up side of the cartridge when a ribbon is installed or reinstalled. Once the ribbon has started to fold, it will not take up properly.

To minimize this condition:

1. The cartridge should be inspected before installing to ensure that the ribbon leader is centered on the ribbon and the supply core. If not, it will cause binds in the cartridge.
2. Ensure that the shock arm wire (15-83) does not contact the supply spool teeth when the ribbon is in the load position.
3. Adjust the left cartridge retainer clip as far left as possible (Figure 1).
4. Form the front cartridge support lug for a clearance of .010"-.015" (0,25-0,38mm) clearance between the cartridge and lug (Figure 1).



(Figure 1)

5. Ensure that the take-up core interlock prevents the cartridge from being turned in the wrong direction when in the load position.

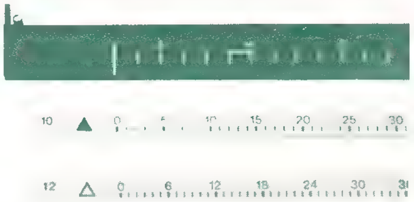
Operators should be instructed to wind the ribbon in the proper direction and only until the leader is even with the right edge of the cardholder. When reinstalling a ribbon, it should only be wound until the slack is taken out. If more movement is necessary, it should be done by typing.

COVERS & MOUNTING

2 PAPER TABLE AND MARGIN SCALE GRAPHICS (CEM 62) (8/70)

Universal erasing tables. Easier to read. Easier centering. Paper tables are marked in inches, beginning at the center.

Margin scales have pitch identification at left end. A filled triangle indicates 10 pitch; an open triangle, 12 pitch.



3 MARGIN TRIM INSTALLATION (10/68)

Margin trim is held in place by glue. The glue is activated by soaking with IBM cleaning fluid. After the glue has become sticky, install the margin trim on the covers.

This can be applied to loose scales also. Simply reactivate the glue with cleaning fluid and reinstall the trim. Often there is no need for trim replacement.

4 MARGIN TRIM – SCRATCHED (1/74)

Appearance "Selectric" Typewriter: Scratched margin trim may be restored to its original "brushed" finish by polishing the aluminum trim with Durite® abrasive paper.

5 SERVICE HISTORY INSERT (1/74)

The recommended location for the service history insert on "Selectric" II typewriters and "Selectric" typewriters with snap-off covers is behind the left cover latch.

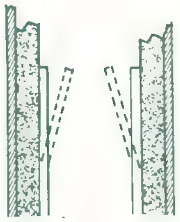
On "Selectric" typewriters manufactured before snap-off covers, a clip (04-49) (P/N 1138386) is available and can be used for mounting the insert to the bottom cover.

6 COVER REMOVAL – FRICTION FIT (10/68)

Care should be used when removing Model 72 bottom case. Insertion of the screwdriver blade between the cover sections may result in damage to the cover paint. The bottom cover section should be removed by inserting a screwdriver blade through the shipping holes at the bottom and applying outward pressure, using the power frame as a fulcrum point.

7 COVER LATCH LEVERS – SERVICE HINTS (10/68)

The top of the center cover latch levers may be formed slightly toward the center of the machine for easier operation of the lever when servicing the "Selectric" Typewriter. Care must be exercised when forming the LH latch lever on 721 machines. If the angle is too great, the lever may contact the carrier assembly when carrier return is operated and the margin is set at position 0.

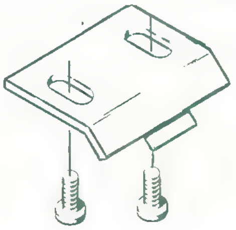


L. H. Latch Lever

R. H. Latch Lever

8 TOP COVER BRACKET (10/68)

The I/O top cover bracket (P/N 1135462) can be used on former level covers. This will ensure a more positive "cover up" position. Two screws (P/N 38235) are needed because of the bracket thickness. These screws are in Parts Packet No. 2.



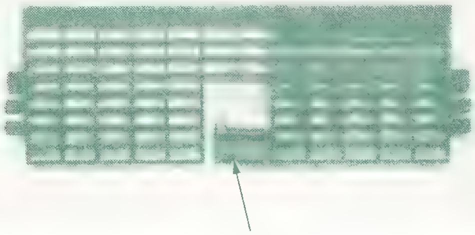
1 MACHINE IDENTIFICATION LABEL (1/74)

All "Selectric" typewriters must be equipped with an identification label showing voltage and current requirements. When covers are replaced, a ribbon mechanism is changed, or the label is missing, order the proper label.

The spaces for the voltage and current requirements on these labels are blank. These requirements must be written or typed in the proper place.

2 MOTOR VENT GRILL DOUBLE INSULATION (CEM 213) (8/73)

Double Insulation: "Selectric" and "Selectric" II Typewriters with the logo "Double Insulation Grounding Not Required" on the rear of the machine or the UL control number "286A" on the patent label must have the extension on the motor vent grill to maintain double insulation standards. If the extension is broken off or is missing, replace the grill.



3 COVER HINGE SCREW – STRIPPED (CEM 311) (3/76)

If the screw hole in the middle cover (where the top cover hinge mounts) is stripped, a possible solution is to use the self-tapping screw (P/N 1190587) to remount the hinge.

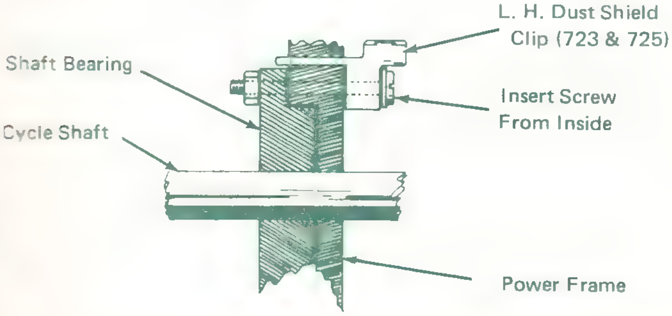
4 COVER INCOMPATIBILITY–7X1 (10/68)

Approximately 2000 Model 7X1 "Selectric" Typewriters between S/N's 5731748 and 5735580 were manufactured using World Trade cover sections. These covers can be identified by the following numbers: 6518613 is cast into the bottom cover on the inside (may be hidden under the foam); 6518503 for the center section; and 6512987 on the top cover.

U.S. cover sections and margin trim are not compatible with these covers. Therefore, if any cover section needs to be replaced on these machines, it will be necessary to replace the complete cover set. Service Code 12 is authorized for the life of the machine for any trouble due to this cover incompatibility.

5 DUST SHIELD CLIP – SERVICE TIP (10/68)

LH Dust Shield Clip: Future service time may be reduced on service calls requiring removal of the LH cycle shaft bearing by reversing the LH dust shield clip (23 and 25) mounting screw. Place the washer next to the screw head; then insert the screw through the dust shield clip and run the screw through the power frame from the inside. The bearing plate will be held by tightening the nut from the outside. When this is done, the dust shield clip and screw need not be removed during future bearing removals.



DEAD KEY

6 DEAD KEY, DEAD KEY DISCONNECT – EXPLANATION (4/77)

The Dead Key Feature removes the escapement trigger from the escapement torque bar lug when typing non-escaping characters. This feature is mainly used in World Trade and nonstandard U.S. keyboards. **This cannot be installed in the field.**

Dead Key Disconnect Feature disables the dead key feature to provide escapement in all typing positions. **This feature can be installed in the field, but only on machines that already have the dead key installed.**

7 DEAD KEY CABLE BREAKING CORRECTING SELECTRIC (296) (7/75)

To prevent dead key cables from breaking, a redesigned correcting mode latch bellcrank is now available.

Symptom: Dead key cable breaking in the escapement trigger area.

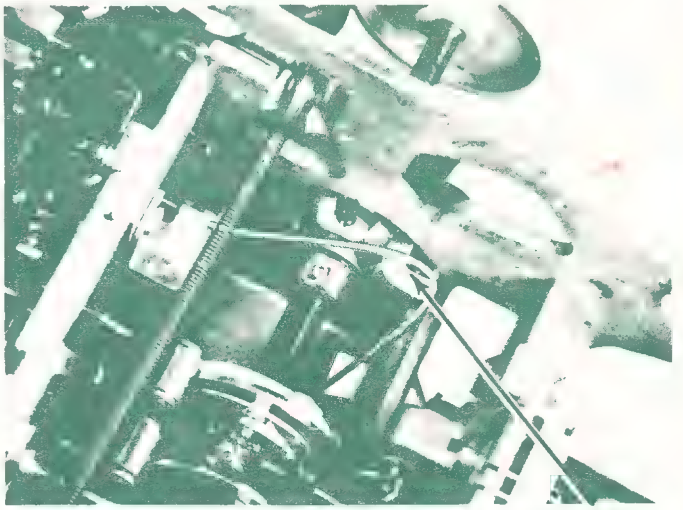
Solution: Install the redesigned mode latch, P/N 1206139.

Parts Required:

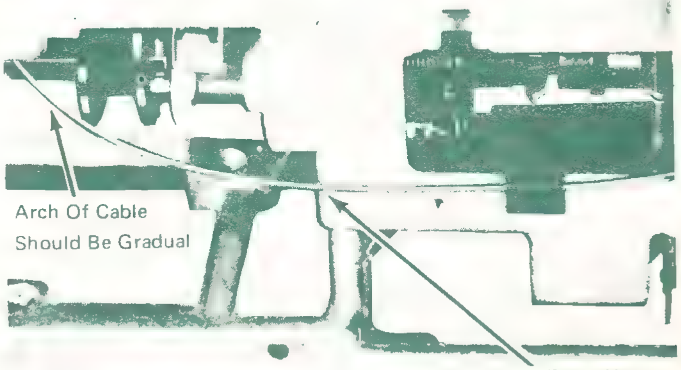
MECH/REF		PART NO.	DESCRIPTION	QTY.
26	80	1206139	Correcting Mode Latch	1

8 DEAD KEY CABLE MAY WEAR GROOVE IN OPERATIONAL SHAFT (10/68)

If the dead key cable assembly contacts the operational shaft, a groove may be worn in the operational shaft deep enough to cause breakage. To remove this possibility, install the dead key cable assembly behind the right-hand dust shield cap. Take up slack until cable just touches clip. Check dead key operation to ensure it is working properly.



(Figure 1)



(Figure 2)

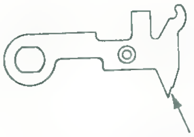
ESCAPEMENT

1 ESCAPEMENT – SINGLE PITCH – SKIPPING (CEM 260) (6/74) (CEM 276) (12/74)

When experiencing skipping during escapement or tab functions, check the tip of the escapement pawl (06-24), P/N 1128201 for wear.

If wear is found, the escapement pawl and escapement rack (06-27) must be replaced. See Parts Manual for proper rack part number.

Quick wear of the new pawl may occur if used with the existing escapement rack.

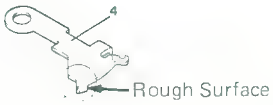


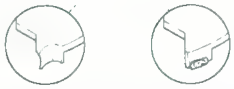
Recovery Code
Expired 12-1-75

2 DUAL PITCH ESCAPEMENT – SKIPPING (CEM 159) (5/72)

If skipping or extra spaces on the dual pitch "Selectric" II Typewriter occurs, check the escapement pawl tip for wear. If the tip is worn, replace the pawl. Also, check the escapement rack for wear or peeled plating. Replace the rack if either condition exists.

Check replacement pawls and escapement bracket assemblies to ensure the working surface of the tip is smooth, scrap pawls that have rough or uneven tips.





Recovery Code
Expired 5-1-73

3 ESCAPEMENT PAWL WEAR – DIAGNOSIS (10/68)

The following list should aid in diagnosing escapement pawl wear:

1. One of the first signs of wear is tab failures (extra space or spaces) on short tabs of approximately one inch (25,4mm).
2. Excessively load the carrier to the right by hand and operate the repeat spacebar. If there is enough wear, the carrier will skip spaces.
3. With the carrier resting on the escapement pawl, move the carrier slightly to the left by hand, and observe the motion of the escapement pawl on the spring lug. If wear is present, the pawl will move slightly toward the front of the machine as it fully bottoms in the escapement rack. A worn pawl will not be fully bottomed when holding the carrier under mainspring tension.
4. A final check for wear is to feel the working surface of the pawl with a springhook. If the pawl is excessively worn, a slight notch can be felt.
   NOTE: It is possible that enough wear may be present to cause failures but no notch can be felt. This procedure is only useful when excessive wear is present.

Although the above-listed aids will simplify diagnosing worn pawls, do not overlook the possibility of other maladjustments as the cause of the problem, i.e., tab rack adjustment, pawl clearance, etc.

4 ESCAPEMENT PAWL SPRING REPLACEMENT (10/68)

When replacing the escapement pawl spring, it may take less time if the tab lever and tab trigger are removed. This will allow access to hook up the spring.

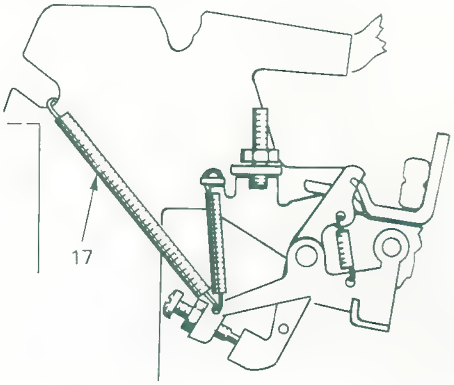
5 ESCAPEMENT SHAFT BEARINGS BIND (10/68)

If escapement failures are caused by a bind in the escapement shaft, the bearings may be hit lightly in or out of the back plate or power frame to better align them with the shaft.

6 ESCAPEMENT – SKIPPING – NEW TRIGGER MECHANISM (CEM 83) (12/70)

Purpose: The trigger upstop adjustment **must** be made properly on 7X3 and 7X5 machines equipped with the new trigger mechanism. By adjusting the upstop for .001"-.005" (0,03-0,13mm) clearance with the trigger arm, it will reduce the vibration or bounce of the escapement trigger when it restores to the rest position.

Since 7X1 machines do not have an upstop, a spring (06-17) has been added. The spring prevents excessive overthrow of the trigger assembly, reducing bounce when restoring.



Parts Required:

MECH/REF		PART NO.	DESCRIPTION
06	17	1133669	Spring, Trigger 7X1

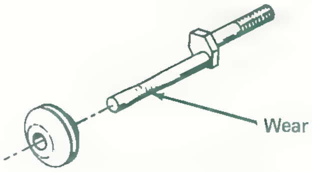
Recovery Code
Expired 12-31-71

7 ESCAPEMENT TRIGGER HEIGHT – VARIES (9/77)

On some machines, the escapement trigger height will differ on the two lobes of the escapement cam, resulting in piling or skipping. This is caused by a bent filter shaft or an eccentric escapement cam. In some cases, rotating the escapement cam 180 degrees will adjust this eccentric condition and allow proper adjustment of the trigger height. If this is unsuccessful, replace the filter shaft and escapement cam.

8 ESCAPEMENT FAILURES – OLDER MACHINES (1/74)

Some escapement failures have been caused by wear on the transport cord idler pulley stud. When worn, the pulley fails to track properly and causes a slight bind. See drawing.



9 ESCAPEMENT TORQUE BAR ADJUSTMENT (PRINT ESCAPEMENT) (10/68)

When experiencing a problem where there is not enough motion to remove the pawls from the rack, the adjustment of the setscrew (18-40) should be checked.

This adjustment controls the rest position of the escapement torque bar.

It is important to check all related adjustments after readjusting the torque bar rest position.

NOTE: Be sure to check out all functions of the machine after making the related adjustments.

1 SPACE-TO-PRINT ESCAPEMENT SERVICE HINTS (1/71)

An uneven typing speed can cause displacement of characters and/or type piling.

DISPLACEMENT:

(Space)

NOW IS (Correct)

NOWIS (Displacement: I was printed in part of the space).

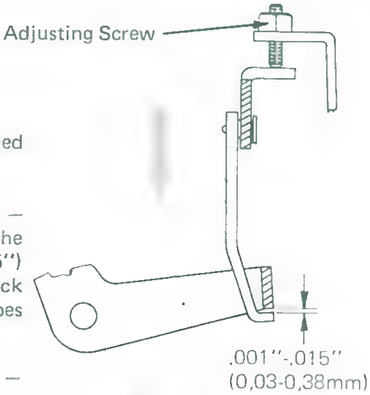
TYPE PILING:

NOW IS (Correct)

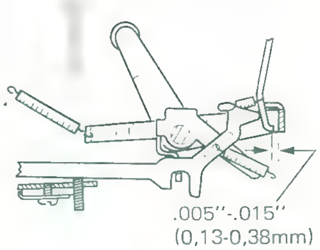
NOWS (Piling)

These conditions can be reduced by the following adjustments:

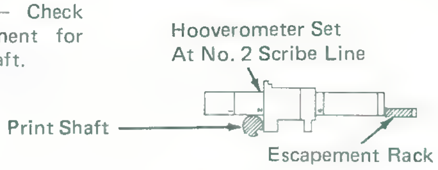
1. Operational Latch Height – Adjust to the low side of the adjustment range (.005") (0,13mm). Be sure to check this adjustment on both lobes of the spacebar cam.



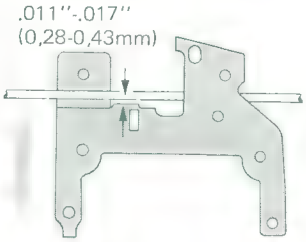
2. Interposer Adjusting Screw – Adjust the interposer adjusting screw so that a front-to-rear clearance of .005"-.015" (0,13-0,38mm) exists between the operational latch and the cam follower. Adjust to low side of the adjustment. Check keylever pawl-to-interposer clearance after making this adjustment (.005"-.015") (0,13-0,38mm).



3. Escapement Rack – Check front-to-rear adjustment for parallel with print shaft.

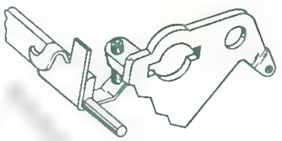


4. Escapement Bracket – Adjust front-to-rear for .011"-.017" (0,28-0,43mm) clearance between escapement bracket and tab torque bar. Check on both ends and center for possible bent torque bar.

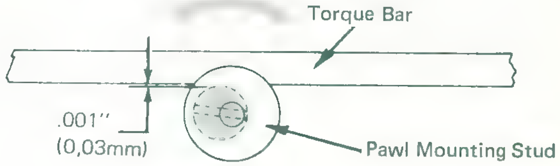


Check All Functions

5. Escapement Torque Bar Stop – Adjust for .005"-.008" (0,13-0,20mm) between the escapement pawl lug and torque bar.



6. Escapement Troque Bar Parallel – Observe at both ends and center of torque bar the clearance between the pawl mounting stud and the torque bar.



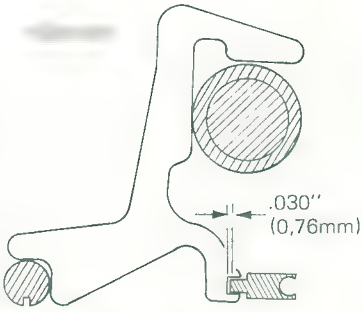
2 ESCAPEMENT – NEW ADJUSTMENT PROCEDURE (CEM 334) (2/77)

This procedure will provide an adjustment sequence to ensure the escapement rail and escapement torque bar are parallel.

It is important when experiencing escapement problems that adjustments are made in the following sequence:

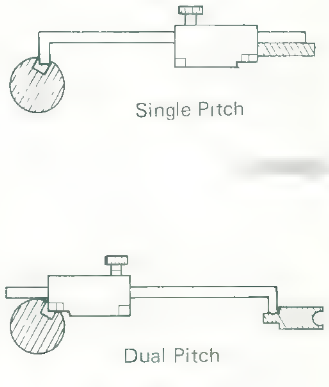
1. Escapement Rack (Single And Dual Pitch) – With the print shaft rotated so the keyway is down, adjust the left end of the escapement rail for .030" (0,76mm) between the platen gauge and the escapement rail.
   a. Loosen first three rail mounting screws from left end and adjust the left end with the platen gauge (Fig. 1). After adjusting the left end, tighten the first rail mounting screw. It is important that this screw is tight to prevent loss of left-to-right position of the rail when adjusting the right end.

CAUTION: Since the left end of the escapement rack is held in place by the escapement rack bearing plate (07-20), adjusting the rail may cause a bow in the escapement rack or a bind in the sector gear and rack gear. If this occurs, loosen the two escapement rack bearing plate screws. Remove the bind and adjust the switch pitch sector gear.



(Right Side View) (Figure 1)

   b. Loosen the remaining screws on the right end. With the print shaft in the rest position, back the cycle shaft against the check pawl. Set the Hooverometer to just reach the distance from the print shaft to the escapement rail on the left end (Fig. 2). Using the Hooverometer (Fig. 2), adjust the center and tighten center screw. At this point, it may be necessary to bend the right end of the rail to match the left and center. Adjust the rail using the Hooverometer and tighten screws. This procedure will ensure the escapement rail is not bowed and is parallel to the print shaft.


Single Pitch

Dual Pitch

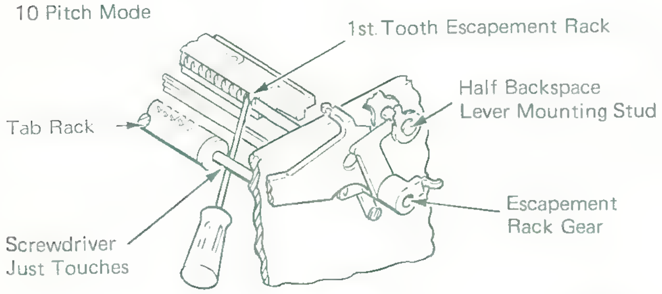
(Right Side View)

(Figure 2)

(Continued On Next Page)

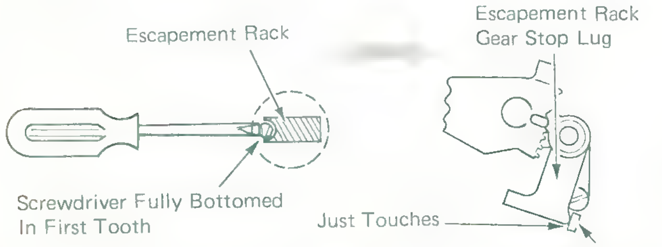
2. Escapement Rack Gear (DP) – With the escapement rack gear stop lug against the half-backspace lever mounting stud, adjust the 10 pitch escapement rack teeth vertically. This can be done as follows: Loosen the escapement rack gear. Insert the blade of a small three inch screwdriver in the first tooth on the left end of the rack. Raise the screwdriver until it touches the tab rack shaft and tap the screwdriver until it is fully engaged in the tooth and the rack stops rotating: then, tighten the rack gear (Fig. 3). This procedure will ensure the rack teeth are vertical.

   NOTE: The tip of the screwdriver blade must be square.



(Rear View) **(Figure 3)**

3. Escapement Rack Gear Lower Stop (DP) – Form the lower stop toward the front of the machine and insert the small 3" (76,2mm) screwdriver in the first tooth of the escapement rack and lightly hit the screwdriver until it is fully bottomed and the rack stops rotating. Form the lower stop until it touches the escapement rack gear stop lug (Fig. 4).


Escapement Rack
Escapement Rack Gear Stop Lug
Screwdriver Fully Bottomed In First Tooth
Just Touches
Escapement Rack Gear Lower Stop

(Left Side View)
(Figure 4)

4. APM Frame 84 – Switch pitch sector gear (DP).

5. APM Frame 85 – Escapement pawl guide lug (DP).

6. APM Frame 86 – Carrier shoe (DP). This adjustment may be observed by applying grease on the escapement rail approximately 2" (50,8mm) from the right end. Type or space to track the escapement pawl through the grease. Carrier return and look down the rack from the right end and observe the track left by the escapement pawl in the grease. The track should be centered in the rack.

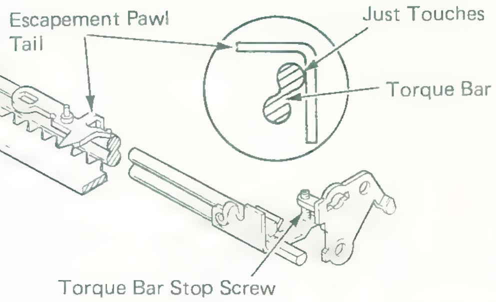
   NOTE: The front carrier support adjustment must be checked before making this adjustment.

7. APM Frame 88 – Escapement bracket.

8. Move the torque bar stop (06-39) and backup screws away from the torque bar. Move the trigger upstop out of the way and disconnect the spacebar link (17-307) (dual pitch only). Disconnect the escapement link.

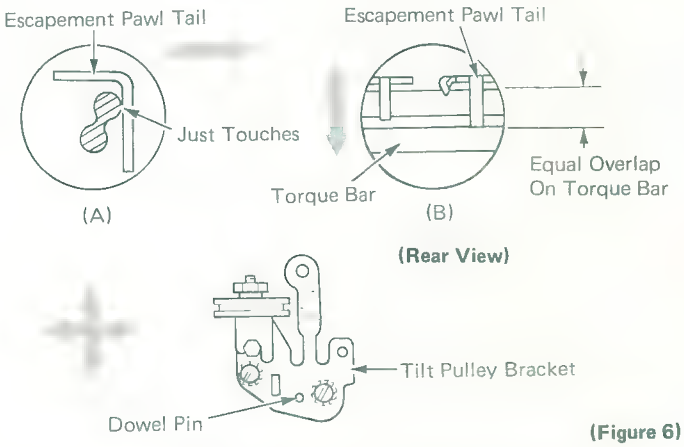
NOTE: Adjustments 9 through 11 are preliminary adjustments.

9. With the carrier at the left, turn the torque bar stop screw (06-55) in so the torque bar just touches the pawl tail (Fig. 5).



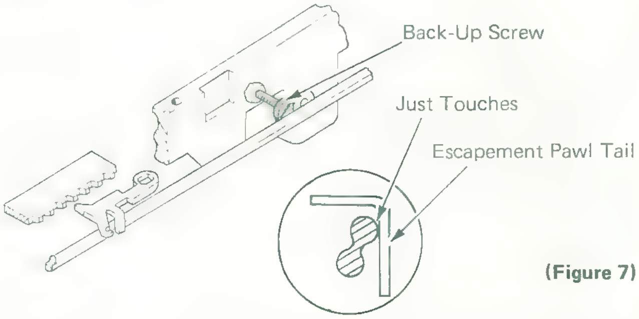
(Figure 5)

10. With the carrier at the right, adjust the tilt pulley bracket (23-50) so that the torque bar touches the pawl tail (Fig. 6). Adjust as follows: (A). If the tilt pulley bracket does not have the dowel pin (23-54), adjust the bracket front-to-rear so the torque bar touches the escapement pawl tail (Fig. 6A). Adjust the bracket top-to-bottom so that the pawl tail overlaps the escapement torque bar on the right side the same as the left side (Fig. 6B). (B) If the tilt pulley bracket is pinned, it is possible to drive the pin in and adjust as in step 10A.



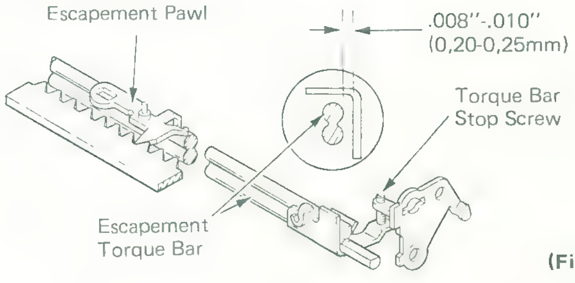
(Figure 6)

11. Move the carrier to the center and adjust the center backup screw so that the escapement torque bar touches the escapement pawl tail (Fig. 7).



(Figure 7)

12. Move the carrier to the left, center and right. Ensure the escapement torque bar is just touching the escapement pawl tail the whole length of the rail. When this condition is met, back the torque bar stop screw out one full turn (Fig. 8). This causes a clearance of .008"-.010" (0,20-0,25mm) between the torque bar and the pawl tail.

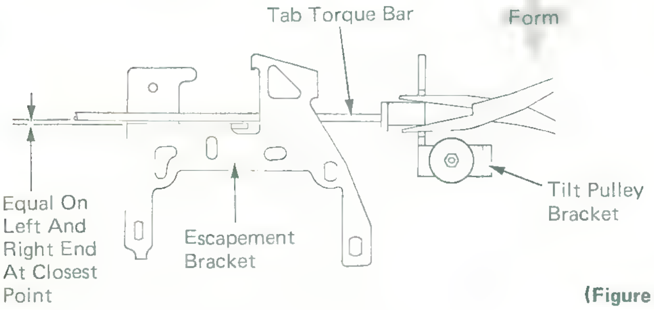


(Figure 8)

13. Adjust the left torque bar backup screw (06-13) (07-13) to just touch the escapement torque bar.

14. With the carrier at the left, check the clearance between the tab torque bar and escapement bracket. Move the carrier to the right and form the tilt pulley bracket lug so the clearance at the closest point between the tab torque bar and escapement bracket matches left side (Fig. 9).

    NOTE: The carrier return latch keeper (03-575) must be removed to make this adjustment.



(Figure 9)

15. Reconnect escapement link and S/B link.

16. APM Frame 93 – Torque bar backstop.

17. APM Frame 95 – Escapement cam.

18. APM Frame 96 – Escapement trip link.

19. APM Frmae 97 – Trigger knock-off.

20. APM Frame 98 – Trigger upstop.

21. APM Frame 122 – Spacebar link (DP).

22. The following procedure may be used to ensure the escapement rail, print shaft and escapement torque bar are parallel. With the machine on, pull the escapement trigger down until the escapement pawl just clears the rack. While holding the carrier with the left hand, move the carrier left and right the full length of the writing line several times, listening to the pawl drag on the tips of the escapement rack. A great difference in sound between the left, center and right ends means that the torque bar and escapement rail are not parallel. Check that the escapement rail is parallel and the escapement pawl tail clears the escapement torque bar by .008"-.010" (0,20-0,25mm) across the writing line. Readjust the necessary adjustments to get this condition.

23. When all adjustments are correct, the carrier should space correctly when slight pressure is put on the left side of the carrier during a repeat spacebar or repeat underscore operation.

NOTE: Refer to "Selectric" APM (F/N 241-5939-0) for drawings of early level machines.

FRAMES

1 CENTER BEARING – REPLACEMENT (CEM 92). (1/71)

A tool is available for replacement of "Selectric" Typewriter center bearings (08-30).

If normal maintenance techniques fail to clear up the problems listed below, the problem may be caused by a worn center bearing.

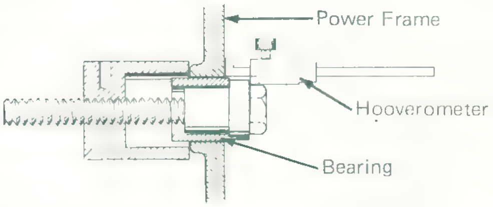
1. Typehead detenting keeps changing.
2. Decrease in motor speed.
3. Negative 5 latch adj. keeps changing.

The following procedure should be used when checking for a worn bearing.

Remove headplay in the clockwise direction and note the position of a typehead tooth to the rotate detent.

Push down and toward the front on the cycle clutch pulley. If there is more than .040" (1,02mm) movement from the point noted, the bearing should be replaced (.040" [1,02mm] is approximately 1/2 the distance from the top of a typehead tooth to the bottom of the notch.). The following procedure may be used to replace the bearing:

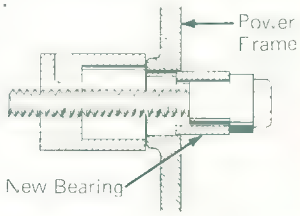
1. Remove the cycle shaft, cycle clutch pulley, cycle clutch latch and slide the operational shaft to the right far enough to allow removal of the torque limiter and the carrier return and tab pinion gears. The cycle shaft and cycle clutch pulley should be replaced with new parts.
2. Install the bearing tool as shown in Figure 1. Gauge the position of the worn bearing by placing the Hooverometer foot against the power frame and slide the Hooverometer head against the bearing pusher. This setting will be used to reposition the new bearing.



(Figure 1)

3. By tightening the bolt, push the worn bearing out of the power frame.

   Note: If the cup turns, a tool can be inserted in the hole near the end of the cup to hold it still.
4. Using a new bearing, install the tool as shown in Figure 2 with the tool "finger" tight. Align the lubrication hole in the new bearing so it will line up with the hole in the power frame when the bearing is installed.



(Figure 2)

5. Press the new bearing into the power frame until the Hooverometer just spans the distance originally measured in step 2 (Figure 1).
6. Reassembly the machine. Be sure to check cycle shaft end play, as it may have changed with the new bearing and cycle shaft assembly installed.

   Note: Center bearing tool, P/N 9900523, requires 9/16 wrench, P/N 173995, or similar.

INDEX

1 INDEX FAILURES (CEM 262) (7/74)

The reliability of the carrier return or index mechanisms may be affected by excessive feed roll pressure, binds in the paper feed mechanism or platen latches, binding platen bushings, excessive carrier return torque limiter or spring clutch pressure, or any other malfunction that would cause an increased load on the mechanisms.

On long carriage machines (7X5-8X5), bending of the operational shaft, because of a loose or maladjusted operational shaft support, allows lost motion in the index/carrier return cam system, resulting in occasional failures under heavy loads, i.e., heavy envelopes, thick carbon copies, etc. In addition, if the interposer bail adjustment is marginal, bending of the operational shaft may result in unwanted repeat indexing and/or carrier return operations.

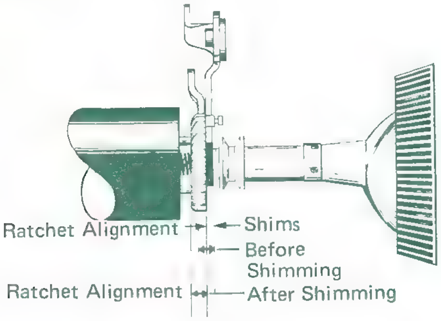
It is recommended that the plastic operational shaft support be replaced with the sintered iron support.

2 INDEX OPERATION – WEAK (CEM 311) (9-76)

If experiencing a weak index operation after completing the index adjustment sequence in APM, check operational shaft support adjustment (25-56). If old level support is on machine, install new level (mech. 25-307).

3 INDEX PAWL & RATCHET ALIGNMENT (10-68)

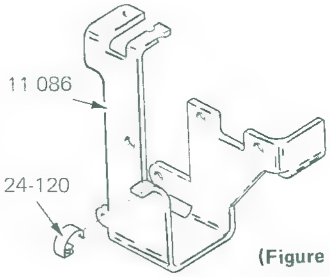
Some indexing failures can be caused by bad alignment of the index pawl and platen ratchet. A combination of nylon shims (P/N 1132674 and P/N 1132327) placed between the platen ratchet and the ratchet retainer will provide proper alignment. These shims are in parts packet no. 8, P/N 1280708.



4 INDEX TRANSFER BELLCRANK STOP LUG – WEAR (LEVEL 1) (307) (12/75)

The index transfer bellcrank stop lug can wear, causing index failures. To provide a new working surface on the stop lug, install metal clip (24-120) (P/N 1147155) on the stop lug as shown (Fig. 1). Clips can be formed for a more positive fit.

NOTE: Check that the index transfer bellcrank does not have excessive side play. Add additional clips (03-632, P/N 1147155) to hold this adjustment, if necessary.



(Figure 1)

Parts Required:

MECH/REF	PART NO.	DESCRIPTION
24 120	1287925	Clip, Bellcrank Stop Lug

Recovery Code Expired 10-30-76

5 INDEXING – 2-2-1/2–3 LINES PER INCH – SER FEATURE (CEM 215) (1/75)

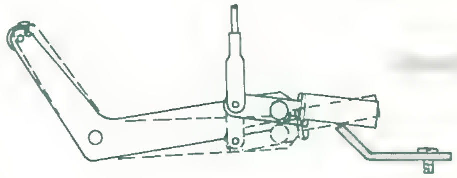
Some "Printing and Publishing" customers are using a modified 54-tooth index mechanism in an OCR application. This mechanism indexes the platen ratchet 4, 5 or 6 teeth, giving 2, 2-/2 or 3 times per inch.

This SER is no longer applicable. It has been replaced by double index. Replacement parts remain available in the APM.

This feature cannot be installed on: 7X1 below S/N 4012015, XX5 or dual pitch machines.

Adjustments:

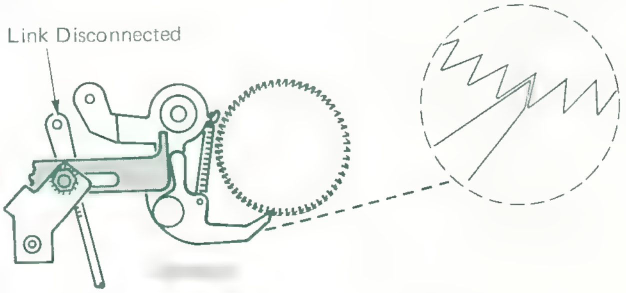
Adj. No. 1

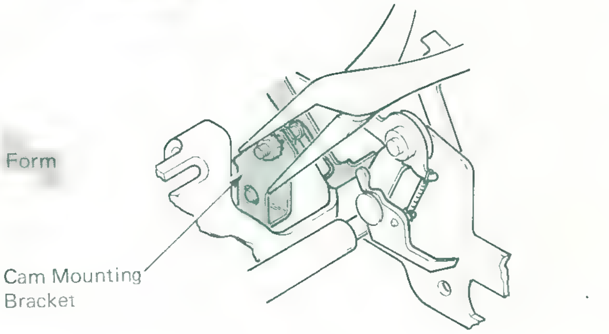


Adj. For 1/2" (12,7mm) Motion Of The Index Link

Adj. No. 2

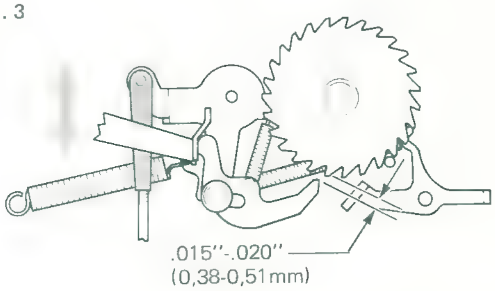
With linespace lever to the rear (6 tooth feed position), adjust for proper pawl entry.





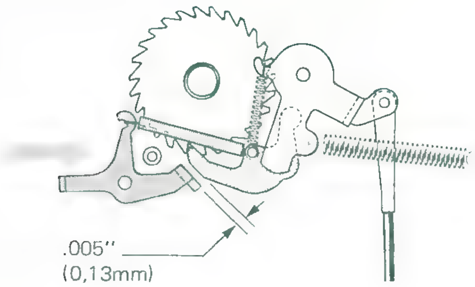
NOTE: Make adjustment with link disconnected and manually rotate pawl assembly into ratchet. If more adjustment is needed, form the index selector cam mounting bracket (20-327). Do not form the selector cam. The index pawl must contact the index selector cam when at rest.

Adj. No. 3



Adjust the index link for .015"-.020" (0,38-0,51mm) pawl tip to ratchet clearance at rest in the 6 tooth feed position.

Adj. No. 4



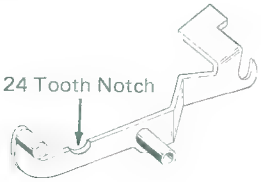
With cam on high point, adjust the platen overthrow stop for .005'' (0,13mm) clearance between the stop and index pawl.

NOTE: The operation of the index mechanism may be affected by excessive feed roll pressure, binds in the paper feed mechanism or platen latches, excessive C/R torque limiter or spring clutch pressure or any other malfunctions that would cause an increased load on the index mechanism.

The reliability of the repeat operation may be improved by changing the index pawl spring (20-434) to spring, P/N 1147436, and removing spring (20-436).

1 PLATEN DETENT IDENTIFICATION (1/71)

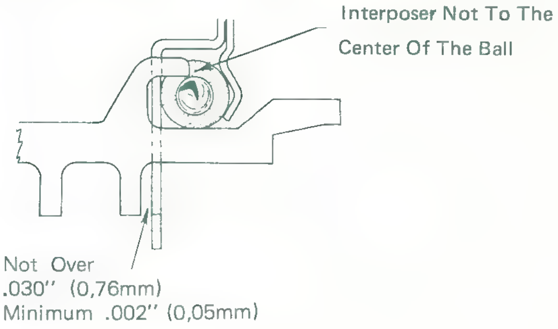
The 24-tooth detent assembly has a notch to identify it from the 27 tooth detent assembly.



KEYBOARD

2 TOUCH PROBLEMS (10/68)

Touch problems can occur if the rear lug of the interposer is contacting the rear interposer guide comb. There should be a minimum of .002'' (0,05mm) clearance. If not, the two keylever fulcrum support mounting studs may be loosened and the guide hit lightly to the rear. If excessive clearance (more than the pusher end of the spring hook) is present, bridging (malselection) can occur. The reason is that the interposer does not extend into the compensator balls far enough.

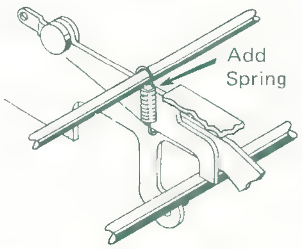


3 KEYBOARD TOUCH PROBLEMS (1/74)

Some touch problems on the "Selectric" Typewriter can be caused by the selector latch bails resting on the lugs of the selector latch interposers. The lugs should clear the bail by .001'' - .005'' (0,03 - 0,13mm).

4 FLICKING (10/68)

A spring, P/N 1090343, may be added between the cycle clutch trip bail and the pawl of the cycle clutch link to reduce bail bouncing.



5 SLOW OR HARD KEYBOARDS (1/71)

A slow or hard keyboard may be caused by the one-piece keyboard locking interposer being partially engaged in the bail compensator tube. Check the adjustment of the keyboard locking bail and ensure that it positively locks the keyboard with the switch in the off position, yet unlocks the keyboard in the on position and allows the locking interposer to clear the compensator balls.

Note: The blue tip of the locking interposer spring should be attached to the interposer.

6 KEYLEVER SIDE PLAY (10/68)

Excessive side movement of keybuttons while typing may be stopped by installing a .003'' (0,08mm) shim, P/N 1141176, between the affected keylever and its bearing support slot.

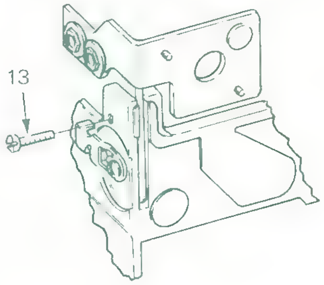
7 BIND IN MANUAL VELOCITY CONTROL MECHANISM (1/71)

On some machines with the manual velocity control mechanism, a bind may exist between the lower velocity cam follower spring and the velocity selection lever. To prevent the bind, washer (P/N 45639) can be installed between the spring and the C-clip on the latch mounting stud.

1 LOOSE KEYBOARDS (CEM 47) (1/70)

A better keyboard mounting screw (08-13) can be installed to correct loose keyboards.

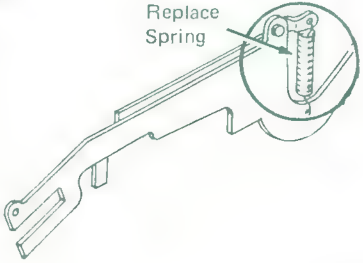
The screw can be used on any 7X3 or 7X5 machine. On early machines the outboard hole is the same size as the inboard hole and the screw head cannot and should not be tightened up to the power frame or breakage of the screw or frame will result. (Be careful to align keyboard and power frame holes.) Later machines have a larger outboard hole. Use of hex-head screw, P/N 1138975, (N/L 185) must be discontinued.



Recovery Code
Expired 12-31-70

2 CYCLE CLUTCH LATCH RESTORING SPRING (CEM 69) (10/70)

Some machines may have been shipped to the field with a heavy spring on the cycle clutch latch. If experiencing a "heavy" or "tight" keyboard, replace this spring with P/N 1123827.



3 CYCLE CLUTCH LINK BINDS (10/68)

Keyboard lock-up may be caused by a bind in the cycle clutch latch link. It is necessary to form the cycle clutch latch bracket so the link runs straight back.

4 CYCLE CLUTCH KEEPER ADJUSTMENT (10/68)

Adjust up or down so the clutch release pawl will pass under the keeper by .001" - .002" (0,03 - 0,05mm) when an interposer is latched down. To check this adjustment, use the following procedure:

1. Latch down an interposer.
2. Hand-cycle the character until that interposer is released from the compensator tube.
3. Latch the same interposer a second time (placing that character into storage).
4. Continue hand-cycling until the cycle clutch latch is point-to-point with its keeper during the restoring part of the first character's cycle.
5. The cycle clutch latch keeper may now be moved up or down and the cycle clutch latch will not move in the latched mode so the .001" - .002" (0,03 - 0,05mm) clearance can be observed and adjusted.

5 KEYLEVER REMOVAL TECHNIQUE (10/68)

The following is an effective way to remove keylevers:

1. Remove top cover.
2. Remove keybutton.
3. Remove margin rack from right-hand side.
4. Loosen bell bail lever.
5. Lift up bellringer bail (do not remove completely).
6. Drop keylever from fulcrum rod and pull keylever out toward the rear of the machine.
7. Reverse this procedure to install new keylever.

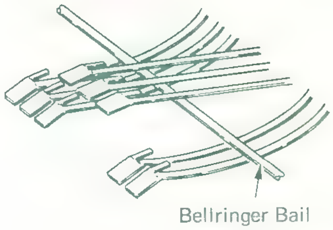
This should not be done in cases where loose keybuttons are a problem, i.e., automatic letter writing machine, etc.

6 KEYLEVER TENSION SPRINGS – REINSTALLATION (10/68)

The keylever tension springs may be restored to their operating position with the covers on. Insert a spring hook through the opening around the spacebar keybutton and reposition the displaced spring.

7 INTERPOSER RESTORING SPRING – REPLACEMENT (10/68)

When replacing an interposer restoring spring, it will help if the keylever pawl leaf springs are put over the top of the bellringer bail while installing the interposer spring. Move the bellringer bail forward and position the leaf spring over it. Reverse the procedure to position the leaf spring on the keylever pawl. Be sure the leaf spring is in the notch of the keylever.



8 KEYLEVER RESTORING SPRINGS (10/68)

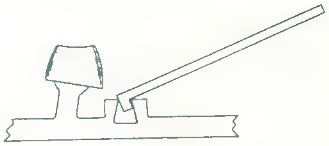
Keylever restoring springs should be lubricated with no. 23 grease in automatic typing applications.

9 KEYLEVER PAWL BREAKAGE ON ROBOTYPER OR AUTO-TYPIST (10/68)

Because of the dual stroke control, keylever pawl breakage is a continuing possibility for "Selectric" Typewriters on the Robotyper or Auto-Typist. Machine operators should be instructed not to operate the robot unit unless the typewriter is running.

10 HOOVEROMETER AS KEYLEVER FORMING TOOL (1/71)

The "L"-shaped part of the Hooverometer can be used as a keylever forming tool to expand the keylever lugs. This procedure is easy and safe to use. Lift up to expand lugs. Use duck bill pliers to close the lugs.



11 BROKEN KEYLEVER SPRING– REPLACEMENT (CEM 311) (9/76)

A broken keylever spring problem (21-135, 136), may be fixed by removing the unused leaf spring from ref. 135 and sliding it between the broken leaf spring and the guide comb (ref. 137 or 138). The screws (ref. 140), should then be tightened.

12 SELECTOR COMPENSATOR ADJUSTMENTS – OLD LEVEL (10/68)

A quick way of adjusting the selector compensator ball end plugs is as follows:

1. Loosen the locking setscrews enough to turn adjusting plug (friction-tight).
2. Latch the left end interposer down.
3. Tighten LH adjusting plug so the balls hold the interposer in the latched position when the interposer latch is disengaged.
4. While holding the interposer latch spring out of position, back out adjusting plug until interposer restores freely. Then back out adjusting plug 1/6 turn more. (One flat of the hexagon nut is 1/6.)
5. Repeat the same procedure on the other side.
6. Tighten locking setscrews.

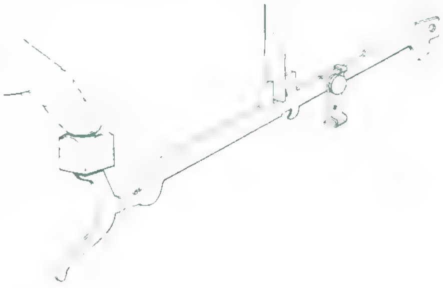
1 INTERPOSER SLIDING OFF THE FILTER SHAFT (10/68)

During a hand-cycled operation it is possible that the B, W, Y, Q interposers will slide off the filter shaft before the interposers have made the correct selection. This happens because of the minimum loading of the interposer on the filter shaft through the interposer latch link. Providing the interposer-to-filter shaft adjustments are correct, no failure will occur during a power operation.

2 KEYBUTTONS – REPLACING (1/74)

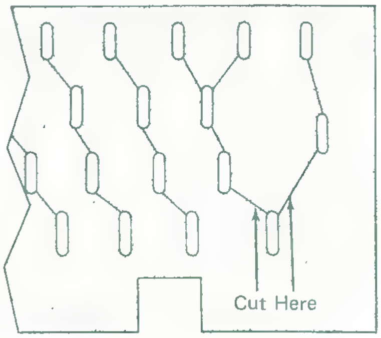
When replacing a keybutton, use the following procedure: disconnect the linecord, turn the switch to the ON position, and hand-cycle the machine while holding the keylever down until the interposer is out from under the keylever pawl. This will allow the interposer to enter the selector compensator and prevent the keylever pawl and interposer from being bent or broken when pressure is applied to the keybutton. If more than one keybutton is replaced, the machine should be cycled each time to allow the next interposer to enter the compensator.

The end of the 6" (152,4mm) screwdriver can be placed in the forming slot of each keylever to prevent the slot from closing up when placing pressure on the keybutton.



3 KEYBOARD INSULATION – REPLACEMENT (1/71)

When a "Selectric" Typewriter has been given a chemical cleaning, time can be saved if the replacement keyboard insulation, P/N 1133637, is first cut between the keybutton stem holes before installing it on the keyboard. (See illustration.)



The keybuttons need not be removed for insulation replacement. Beginning at the left side, position the rear part of the insulation under the rear row of keybuttons. Use caution when stretching the insulation under the remaining keybuttons. Remove all wrinkles, folds and twists from the insulation so no open areas exist in it.

MARGIN, LINELOCK AND BELL

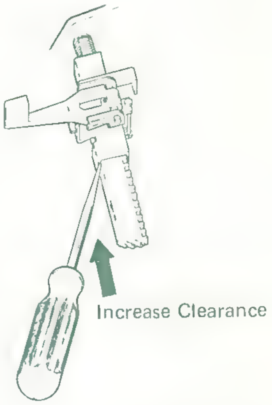
4 MARGIN SLIDERS – BINDING (CEM 194) (3/73)

Binding margins on "Selectric" typewriters can be caused by the machine being too low in the covers. When experiencing this problem, raise the machine so there is a slight clearance between the margin slider and the chrome strip on the center cover.

5 BINDING MARGIN STOPS (10/68)

Binding margin stops can usually be improved by increasing the clearance between the margin stop and margin rack. To make this adjustment, move the margin stops to the far left side to prevent damage to the margin rack.

Polishing the margin rack with Druite® paper can also reduce a binding condition.



6 SWITCH PITCH GEAR ADJUSTMENT (CEM 311) (3/76)

When adjusting the margin switch pitch gear (dual pitch) end play (APM, frame 312), it is necessary to remove all of the motion of the rack within the rail to the left. This can be performed by holding the rail and moving the rack to the left with the right margin slider.

7 MARGIN LEVER REPLACEMENT (10/68)

The margin lever pin can be pushed out of its mounting by use of needlenose pliers. Place one jaw of the pliers on the inside of the bracket and the other jaw on the right end of the pin. Squeeze pliers and the pin will be pushed out. No cutting is necessary and the same pin can be used to mount the new margin lever.

8 MARGIN STOP PIN AND SLIDER INSTALLATION (10/68)

A new pin and slider assembly can be installed without cover removal. Hook the "T" end of the new slider in front of the margin stop where it normally belongs with the pin end aligned above the "U" slots in the margin stops. Pressing down on the pin end with your thumb will push the pin into the assembled position. Use your forefinger to support the rack.

CAUTION: The margin rack must be held from rotating beyond the margin release position.

9 BELL MOUNTING STUD REPLACEMENT (10/68)

The following techniques may prove successful in replacing broken bell mounting studs on machines where the studs have been installed by rivets into the left-hand keyboard side plate:

1. Order P/N 1141117 – bell mounting stud (old-style) and P/N 1118361 – grip clip retainer.
2. Break off remainder of stud or use a file to make it flush with side plate as necessary.
3. Center punch and drill hole through broken stud using no. 28 (3,57mm) drill bit.
4. Tap hole in side plate with 6-32 tap.
5. Install replacement stud in side plate.
6. Attach bell using grip clip retainer, P/N 1118361.

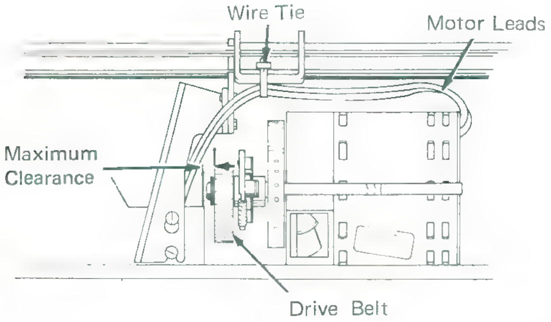
MOTOR AND DRIVE

1 MOTOR REPLACEMENT PROCEDURE (CEM 101) (5/71) (CEM 165) (5/72)

The following is a motor replacement procedure for machines built before the overhead lead motor.

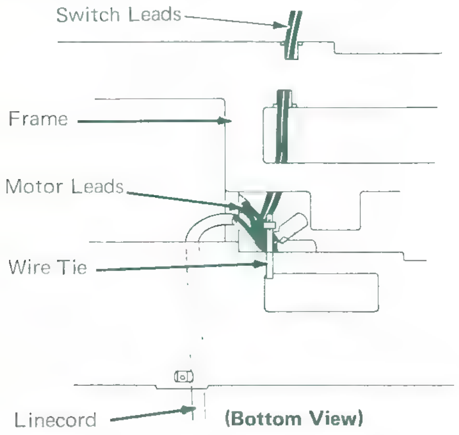
Presently, all 115 volts 60 Hz motors shipped from Lexington are the overhead lead type. When replacing an older motor with this motor, transfer the old mounts to the new motor. Order two mounts, (11-41) (P/N 1174096) if the old motor has hexagonal mounts. Use either of the following procedures according to model and level of machine.

1. Place wire through power frame and connect to the same points as the old motor (Fig. 1).



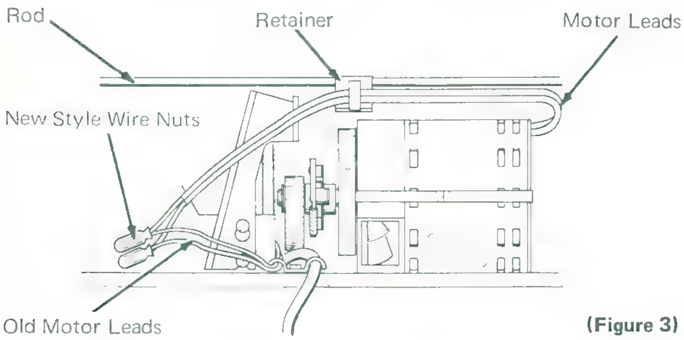
(Figure 1)

Secure leads to power frame with wire tie (Fig. 2).



(Figure 2)

2. Cut the old motor leads at the motor. Run them under linecord or cord clip and attach to new motor leads. (Fig. 3).



(Figure 3)

The overhead motor leads must be held up and out of the motor clutch. This can be done with a wire tie or a retainer clip. The clips should be used when there is a possibility that the motor leads may slide into the motor clutch.

Placing the wires past the rotate latches is not recommended. The motor leads are now much thicker and may interfere with mechanisms close by.

Use of this motor on pre-double insulated machines does not raise them to double insulated standards.

CAUTION: New wire nuts (yellow) with the safety skirt must be used. Old style wire nuts do not meet present safety standards.

Parts Required:

MECH/REF		PART NO.	DESCRIPTION
11	38	1159519	Tie
	41	1174096	Mount
	69	1132028	Retainer
	70	1124799	Wire Nut

2 MOTOR – THERMAL PROTECTED (CEM 311) (3/76)

The "Selectric" motor is equipped with an internal thermal coupler that acts as a circuit breaker when it becomes overheated due to an excessive load on the motor. If a motor will not start due to a bind in the drive mechanism, the bind should be removed. Next, the motor should be allowed to cool to give the coupler time to close. This will prevent unnecessary replacement of the motor.

3 LINECORD REPLACEMENT (CEM 82) (12/70)

Safety Precautions: The use of a replacement type plug is not authorized on OPD "Selectric" typewriters. Double insulation standards applying to current production machines require a molded plug at the end of the linecord.

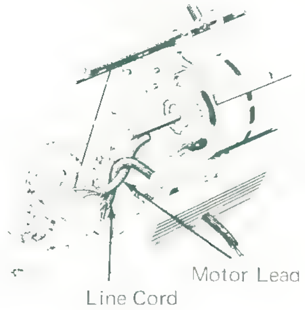
Safety Corrective Action: The same diameter cord must be used for replacement. The older level large diameter cord cannot be replaced with the current level smaller diameter cord. There is not enough insulation on the smaller cord to allow a safe installation without the use of the molded strain reliefs made on the exact replacement cord.

Linecord restraining clamps should hold the linecord tightly. They should be replaced if necessary, not formed to meet this condition. Care must be taken to place the wires so that they do not contact moving parts.

Tight linecords can cause damage to cord insulation, resulting in a possible safety hazard. Leave enough slack in linecords or cable to allow the machine to tilt up.

4 LINECORD, SWITCH & MOTOR LEADS – ROUTING (CEM 52) (7/70)

When replacing linecord, switch, or motor, be careful to place the linecord over the top and around the motor lead insulating tube. This is necessary to prevent the insulating tube from coming in contact with the motor clutch or drive belt.



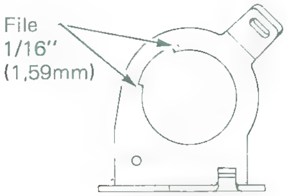
1 IDLE NOISE (CEM 268) (9/74)

Idle noise on "Selectric" typewriters can be minimized by making the following checks and adjustments:

A. BINDS
  1. Cycle clutch end play/overthrow.
  2. Operational shaft end play.
  3. Shift clutch spring clearance.

B. MOTOR
  1. Drive belt tension/tracking.
  2. Motor should be parallel to frame.
  3. Inspect condition of Mylar® insert.
  4. Ensure weight on clutch pawl is not hitting drive belt.
  5. Inspect condition of rubber motor mounts.
  6. Ensure mounting brackets are not pressing in on motor.
  7. Remove the metal shipping rings located between motor and rubber mounts.

     NOTE: One procedure to remove the rings is to first break them and then twist into a roll with a "T" bender or duckbill pliers. Be sure to check the rubber mounts for proper installation after removing the rings.
  8. The motor mounting bracket slots can be reduced approximately 1/16" (1,59mm) with a file to relieve pinching of the rubber mounts.



C. COVERS
  1. Ensure machine does not contact any part of the covers — copy lever, switch pitch lever, etc.
  2. Machine should be level in the covers and not hitting on the bottom cover.
  3. The copy control lever shaft should not be touching the A-frame assembly.
  4. The service feet should not extend through the bottom cover.

2 MOTOR HEAT (1/74)

The temperature warning label is no longer required. However, the operating temperatures of the shaded pole motor are high enough to burn the hand if handled immediately after use. A folded shop towel can be used for protection.

3 STATIC SPARKS IN AREA OF MOTOR (1/74)

Static discharge spark may be noticed on any product with rubber drive belts where the motor is insulated from the power frame.

The condition does not cause a safety problem. If it is unwanted, it can be stopped by replacing either motor cushion ring.

The static build-up was noticed in OPD products in early 1968. At that time, the specifications were changed on all motor cushion rings so that they were just conductive enough to prevent static build-up.

Do not use a resistor, grounding jumper wire or any other fix other than the cushion ring change to eliminate this condition. Make change only where static discharges are noticed between motor and power frame. Normal static discharges, due to build-up on clothing, furniture, etc., which discharge to machine frame or any other metal object, will be unaffected by this change.

4 SPIRAL GROOVE MOTOR SHAFT (10/63)

The Mylar® insert motor pulley can be used on motors that have the spiral groove shaft. It was previously believed that the grooves would raise burrs on the Mylar® insert. Caution should be exercised when installing the insert and pulley to be sure that the insert is not burred, which would result in a clutch failure. When the current level motor pulley is used, it is recommended that the complete motor clutch bill of materials be installed.

5 CURRENT DRAW (SCHOOL INSTALLATIONS, ETC.) (1/71)

The shaded pole motor uses approximately 1.0 amp as compared to approximately .5 amp on a split capacitor motor (Model C). The total number of machines being plugged into one circuit must be considered to prevent circuit over-load. This is particularly important in planning school installations.

6 MOTOR CLUTCH SPRINGS — TENSION (10/68)

Do not shorten the centrifugal motor clutch pawl springs. This allows the pawls to engage at too high a motor speed causing them to bounce on the lugs of the motor pulley. This causes round edges on the pawls.

7 WORN MOTOR PULLEY BUSHING (10/68)

If the motor pulley bushing becomes worn, it can cause a vibration. Replace the bushing (11-44) (P/N 1159211) to correct this condition.

8 MOTOR PULLEY AND BELT WEAR (3/71)

When replacing a drive belt that has worn or stripped out cogs, also replace motor pulley (11-48).

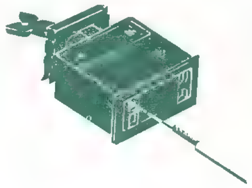
9 BELT REPLACEMENT (10/68)

1. Cut off old belt if you do not expect to use it again.
2. Disconnect latch bail springs, pull out latches, drop bail down.
3. Remove cycle cam shaft gear.
4. Remove cycle clutch check latch and spring.
5. Remove two screws and stud holding cam shaft bearing plate, and remove bearing plate. It may be necessary on some machines to remove the compensator from its mounting bracket. If so, follow steps 6 through 7.
6. Loosen print shaft gear, rotate head counterclockwise to loosen tape, and rotate print shaft to detent head.
7. Remove compensator mounting shaft.
8. Work belt off over cam shaft.

Replace in reverse order and adjust or check:
1. Check cam shaft end play, use shims if necessary.
2. Adjust gear train for minimum backlash.
3. Adjust filter shaft timing, shaft end play.
4. Adjust print shaft timing, shaft end play.
5. Check escapement cam timing and spacebar interlock.
6. Check shift interlock cam.
7. Adjust belt tension.

10 QUICK WIRE SWITCHES — LOOSE WIRES (CEM 67) (9/70) (CEM 239) (1/74)

When experiencing electrical or switch problems on machines with the "quick wire" connection switches, it is possible that the wires are not being held firmly in place. If this condition exists, replace the switch.



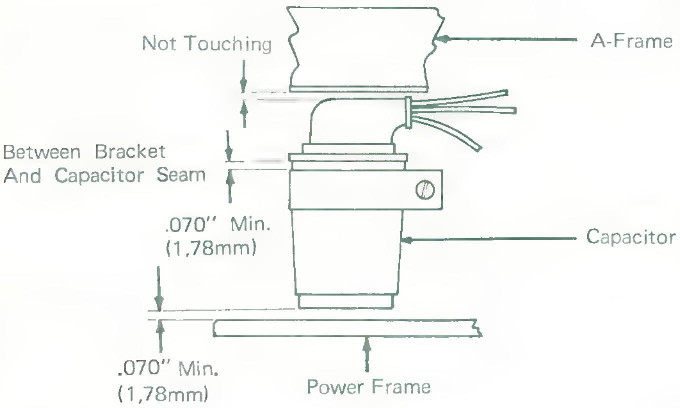
1 CAPACITOR BOOT — "A-FRAME PAPER FEED

(CEM 186) (10/72)
(CEM 238) (1/74)

On "Selectric" typewriters with "A-frame" paper feed and capacitor start motors, the capacitor boot may touch the "A-frame."

If the capacitor is positioned too high or too low, it can cause the rubber boot to come into contact with the lower extension of the "A-frame." If the boot should wear through, the possibility of an electrical shock exists.

Ensure that the capacitor is properly positioned.



2 RECONDITIONED "SELECTRIC" TYPEWRITER — UL DOUBLE INSULATED

(CEM 176) (8/72)

All "Selectric" typewriters reconditioned as of 3-3-72 meet UL double insulation standards requirements which are:

1. Holes in bottom cover where the motor is exposed are plugged.
2. White tubing is placed over the motor leads and is held in place by an additional piece of shrink tubing.
3. The grill vent has the "gate." This prevents the linecord from resting on cover or powerframe.
4. A patent lable containing the following:
   - a. The words "double insulated" use only exact replacement parts.
   - b. The UL control number 286A.
   - c. The word "listed."
   - d. The UL Symbol.

NOTE: The current production "Selectric" Typewriter motor (11-40) is considered an exact replacement part for any reconditioned "Selectric" Typewriter.

Patent labels and stickers remain the same as production machines.

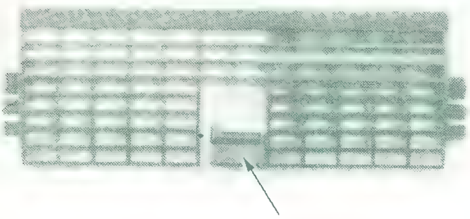
Double insulation cannot be field installed.

3 MOTOR VENT GRILL — DOUBLE INSULATION

(CEM 213) (8/73)

To maintain double insulation standards current level "Selectric" and "Selectric" II Typewriter motor vent grills must have the grill extension. The extension protects the linecord from contact with the bottom cover.

If extension has been broken off or is missing, the grill must be replaced.



NOTE: Double insulated machines manufactured before the UL standard for double insulation do not require the extension on the vent grill.

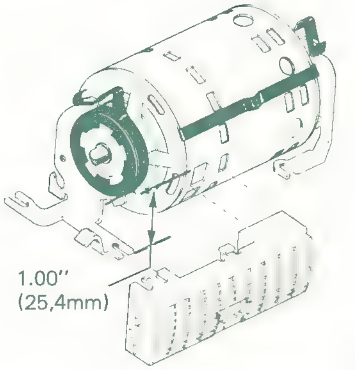
Machines Affected: Current level "Selectric" and "Selectric" typewriters with the logo — "Double insulation grounding not required," on the rear of the machine, or the UL control number "286A" on the patent label.

4 MOTOR AND VENT GRILL — REDESIGNED

(CEM 122) (10/71)

Some machines were manufactured using a motor with the no exhaust snout. This motor requires a redesigned vent grill for proper direction of motor heat.

If removal or replacement of motor is necessary, rotate the motor so that the top of the upper exhaust opening is 1.00" (25,4mm) above the bottom of the motor bracket. This ensures that the heat from the motor will be directed out of the machine.



Parts Required:

MECH/REF	PART NO.	DESCRIPTION
711 40	1287296	Motor, Snoutless 115V 60 Hz

NOTE: New grill is compatible on all machines with snap-off covers.

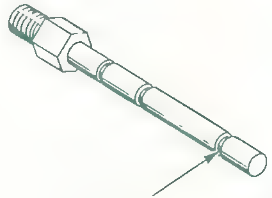
5 ON-OFF/TAB KEYBUTTON MOUNTING STUD

(CEM 104) (6/71)

The replacement stud announced in CEM 50 is designed for use on both "Selectric" typewriters and "Selectric" I/Os.

If interference between this stud and covers on the "Selectric" is experienced, the end of the stud may be broken off at the first groove of the stud.

Ensure that sharp edges are removed.



OPERATIONAL CONTROL

1 INTERPOSER LATCH (CEM 158) (5/72)

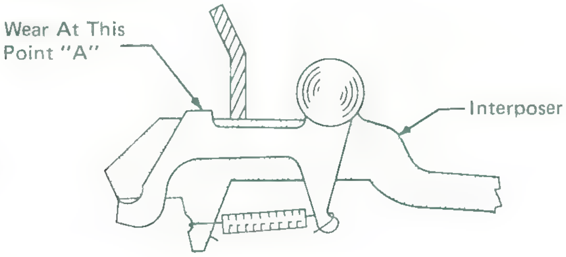
Extra operational functions caused by the latch pawl slipping off the latch plate may be caused by a burr on the interposer latch.

Install new interposer latch.

Recovery Code
Expired 5-1-73

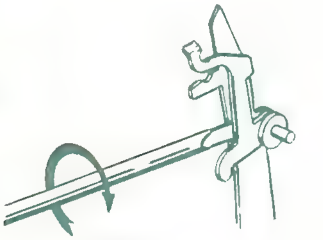
2 UNWANTED OPERATIONS – RANDOM OR EXTRA (CEM 221) (10/73) (CEM 251) (4/74)

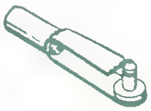
Unwanted operations may sometimes be caused by a worn latch on an operational interposer. A small amount of wear at point "A" may cause the interposer to repeat after a wanted operation or come off due to vibration during normal typing. This results in an unwanted operation. The latch plate should also be checked for wear and replaced if any signs of wear are found.

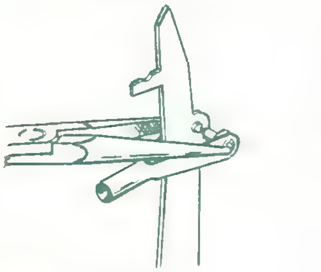


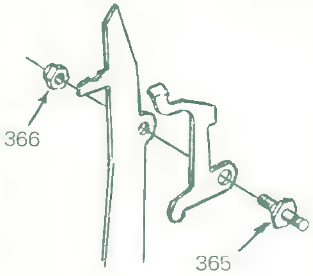
3 OPERATIONAL LATCH REPLACEMENT TECHNIQUE (10/68)

A procedure for removing the rivet from the interposer, when the rivet is stuck in the interposer, follows: Break the head off the rivet, and take a small locking clevis from parts packet no. 6. Cut the hole side just below the pin hole. Insert the clevis with the pin side on the RH side of the rivet and squeeze the clevis with the needlenose pliers. This will usually force the rivet out of the interposer. It may be necessary to use a stone to remove the rivet on the LH side and force the rivet out the RH side.


Step 1


Step 2


Step 3



Step 4

4 INTERPOSER HEIGHT ADJUSTMENT TIP (10/68)

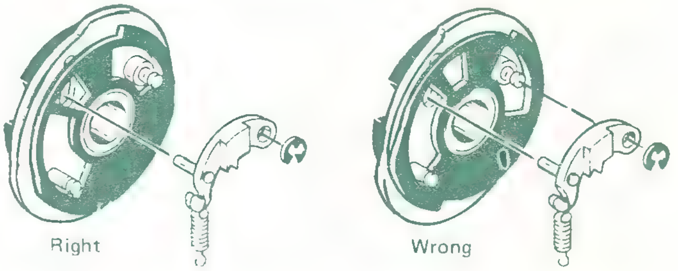
Hold the clutch release arm so the cam repeats and turn in on the interposer adjusting screw until the mechanism begins to operate. Back the screw out until the mechanism stops operating and then give it an additional 1/2 turn.

5 INTERPOSER INERLOCK LINK (10/68)

Operational Interposer Interlock Link: Retaining clip, P/N 1138464, can be used to prevent the operational interlock from moving to the left on the bail. This will prevent the operational interlock from turning over and causing a service call.

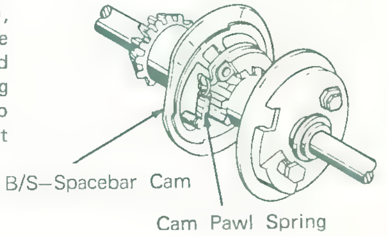
6 OPERATIONAL CAM PAWL INSTALLATION (10/68)

Operational Cam Pawl Installation: Caution should be used when installing an operational cam pawl to prevent machine lock-up or cam release lever breakage.



7 OPERATIONAL CAM PAWL SPRING INSTALLATION – SPACE – BACKSPACE CAM (CEM 108) (8/71)

When replacing a cam pawl spring (25-40) (P/N 1116729), install the spring with the open side of the loop toward the cam. This prevents spring breakage caused by the loop of the spring working against the cam wheel.



8 OPERATIONAL CAMS NOT RELEASING (CEM 240) (1/74)

Failure of an operational cam to release may be caused by a burr on the C-clip (25-203) that positions the operational cam release arm (25-205, 239).

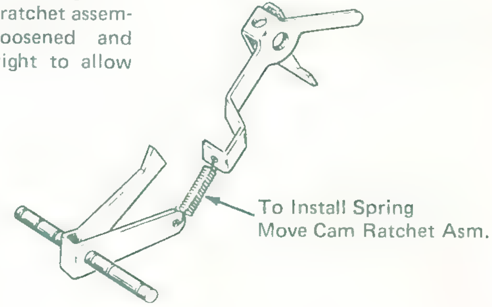
If experiencing intermittent operational failures because the cam fails to release, replace both C-clips.

9 PINION WEAR (10/68)

Tab/Carrier Return Pinion: The working surfaces of the cord drum, tab pinion gear, and the carrier return pinion gear should be free of lubrication. Lubrication of these points will cause erasure build-up and cause wear of the pinion gear teeth.

10 CHECK PAWL SPRING INSTALLATION (10/68)

When installing an operational cam check pawl spring, the operational cam ratchet assembly can be loosened and moved to the right to allow serviceability.



1 OPERATIONAL CAM ASSEMBLY SETSCREW (CEM 70) (10/70)

Setscrew — Cone Pointed: To prevent the cam and ratchet assembly from coming loose on the operational shaft, a cone pointed setscrew, P/N 316781, is being used on Model 7X3 and 7X5 machines. When readjustment of the cam and ratchet assembly is necessary, it may require a slight rotation of the operational shaft since the cone pointed setscrew makes an impression further into the operational shaft than the previous cup-pointed screw.

NOTE: This change has not been incorporated in the 7X1 because of the frequent readjustment of this assembly, since it determines the endplay of the operational shaft.

2 OPERATIONAL SHAFT REMOVAL TECHNIQUE (10-68)

1. Remove the shift clutch ratchet and clutch spring. Do not maladjust the clutch arbor.
2. Loosen setscrews in torque limiter hub, tab governor hub, tab governor collar, operational cam ratchet (and RH shaft collar if long carriage).
3. Remove clip from CR pinion spring.
4. Push torque limiter hub to the left as far as possible; then, expand the coils on the CR pinion spring and, with the pusher end of a spring hook, push the left hand opinion retainer off the shaft.
5. Move the pinion gear to the left and remove the retainer clip at the right side.
6. The operational shaft may now be pulled out through the shift bearing toward the right. Any part mounted on the shaft or around it may be easily removed or replaced.

Inserting the turning wheel in the operational shaft before removal or installation of the shaft will help in handling the shaft.

The shift clutch arbor is not loosened from the shaft when the shaft is removed. Therefore, when re-installing the shaft, push it in until the arbor is against the shift bearing (.002"-.004" end play) (0,05-0,10mm). This will place the carrier return pinion gear into the same position as before. Since none of the shift mechanism was removed, no shift adjustments are changed.

In order to reset the operational cams in their original position, use the push end of a spring hook to equally measure distance between cams and check pawls. For ratchets which have only one setscrew, be certain the screw is tightened to the flat side of the operational shaft.

Reset the tab governor hub and collar, observing the proper mesh and end play adjustments.

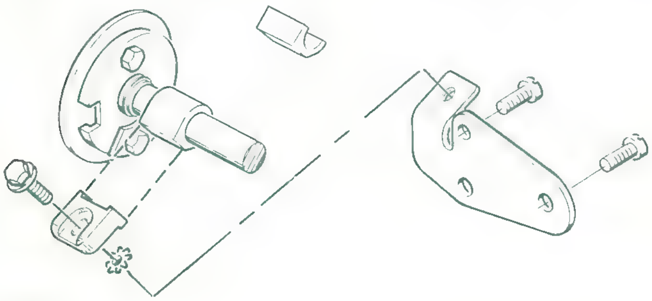
After reinstallation of the C-clip retainers on either side of the carrier return pinion gear, move the torque limiter spring hub to the right as far as possible. Then spread the torque limiter spring loops and insert a .005" (0,13mm) feeler gauge blade between the torque limiter hub and the torque limiter arbor. Tighten the torque limiter hub; then remove the gauge.

Install the clip which connects the CR pinion spring to the torque limiter arbor.

3 OPERATIONAL SHAFT SUPPORT — NEW (CEM 289) (5/75) (CEM 311) (3/76)

Install the ears on the support to both sides of the flat on the bearing using slight pressure. (Do not force the support enough to bend the operational shaft.) Then tighten the screw. Lubricate on each service call.

NOTE: The field installable B/M uses a cut away bearing (25-305) which can be installed without removing the operational shaft.



Parts Required:

MECH/REF	PART NO.	DESCRIPTION	QTY.
25 306	1206838	Support Asm.	1
307	1287917	OP Shaft Support B/M (Contains Ref. 53, 55, 56, 303, and 305)	1

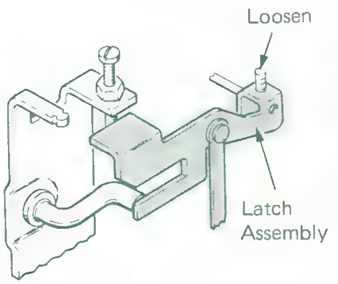
NOTE: This support replaces old level support. Order the bracket, support, lockwasher and bearing when replacing the bracket or support on the old style.

4 OPERATIONAL CAM FOLLOWER REPLACEMENT PROCEDURE (CEM 301) (11/75)

When necessary to replace the carrier return (25-204) or spacebar (25-202) cam follower, replace both.

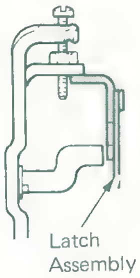
The suggested replacement procedure is as follows:

1. Unplug machine.
2. Remove escapement trip link (07-10).
3. This procedure does not require removal of the operational shaft; however, it may be removed at this time.
4. Unhook CR (25-213) and SB (25-201) cam follower restoring springs.
5. Remove on-off switch from mounting bracket.
6. (Dual Pitch) Remove index interlock link (24-017).
7. Unhook lower index link from multiplying lever.
8. Remove the SB (Single Pitch) CR and BS latch springs (25-210).
9. Loosen CR latch assembly setscrew (03-604) and move latch assembly toward center of machine (Figure 1) and pivot up as shown (Figure 2).



(Rear View)

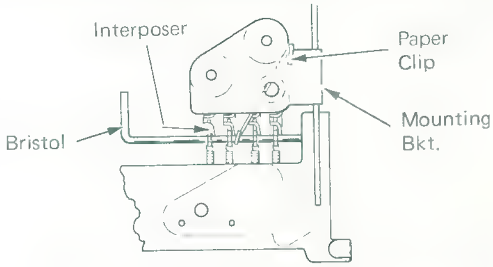
(Figure 1)



(Rear View)

(Figure 2)

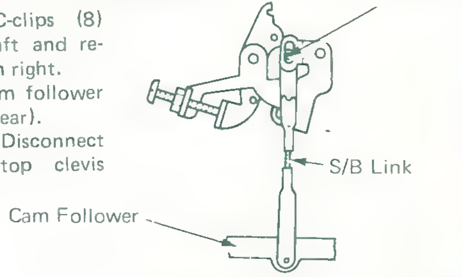
10. Install bristol wrench through holes in interposers and attach to RH mounting bracket with paper clip (Figure 3).



(Bottom View)

(Figure 3)

11. (Correcting) Unhook correcting keylever link (26-090) and spring (26-081) from mode latch (26 - 082).
12. Remove all C-clips (8) from pivot shaft and remove shaft from right.
13. Remove CR cam follower (from front or rear).
14. (Dual Pitch) Disconnect SB link at top clevis (Figure 4).

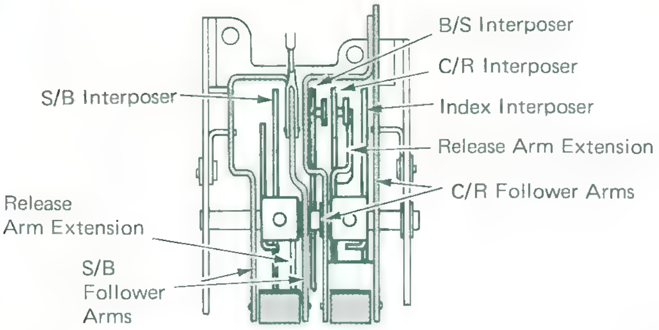


(Right Side View)

(Figure 4)

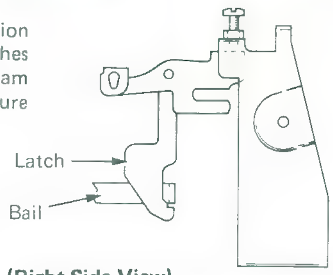
15. Remove SB cam follower from front of machine.
16. Replace CR cam follower:

  a. (Dual Pitch) Position the index, CR and BS interposers between the cam follower arms (Figure 5).



(Top View) **(Figure 5)**

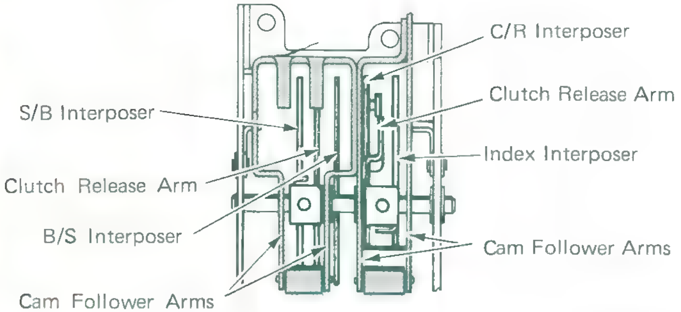
  b. (Dual Pitch) Position the CR and BS latches to the front of the cam follower bail (Figure 6).



(Right Side View) **(Figure 6)**

  (Single Pitch) Position the index and CR interposers between the cam follower arms (Figure 7).

  c. Position the clutch release arm to the right of the CR interposer (Figures 5 and 7).



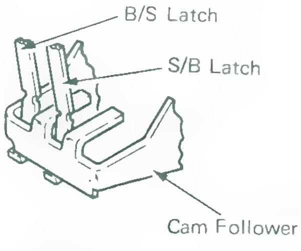
(Top View) **(Figure 7)**

17. Install pivot pin through RH cage plate, CR cam follower and clutch release arm.
18. Install SB cam follower:

  a. (Dual Pitch) SB link may be installed with the cam follower. With cam follower in place, hook clevis (17-306) to bellcrank.

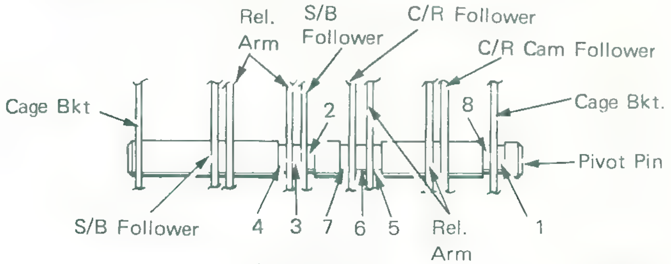
  b. (Dual Pitch) Position the SB interposer and clutch release arm between the cam follower arms with the clutch release arm to the right of the interposer (Figure 5).

  c. (Single Pitch) Position the BS and SB interposers and clutch release arm between cam follower arms (Figure 7) with the latches in their slots and under the cam follower bail (Figure 8). The clutch release arm extension should be between the interposers (Figure 7).



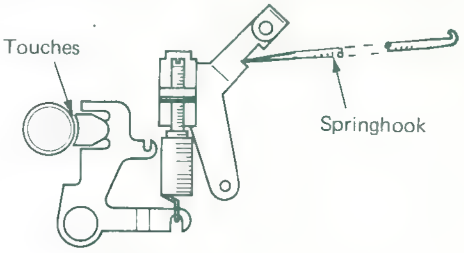
(Rear View) **(Figure 8)**

19. Install the pivot pin through the SB cam follower and clutch release arm and install the C-clips in the following order (Figure 9).
NOTE: Number 8 is a bias C-clip.



(Bottom View) **(Figure 9)**

20. Position the CR latch asm. in place and with pusher end of spring hook, push arm against CR spring and tighten setscrew (Figure 10).

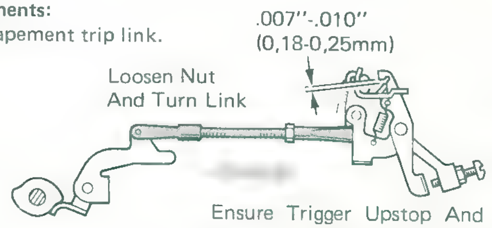


(Level 2)

21. Install index link to multiplying lever (rear hole is for 36 tooth only).
22. Hook SB (Single Pitch), CR and BS latch springs. (This is done by half cycling the OP cam while holding latch from under bail. Latches may now be easily accessed.
23. Reconnect CR and SB cam follower restoring springs.
24. Replace index interlock link.
25. Replace on-off switch.
26. Reconnect correcting keylever link and spring.
27. Remove paper clip and bristol wrench.
28. Replace escapement trip link.

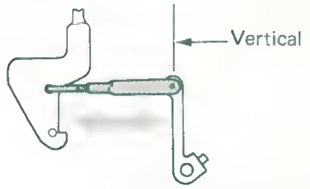
Adjustments:

1. Escapement trip link.

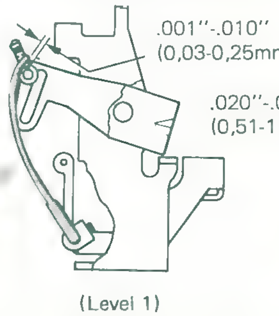


Ensure Trigger Upstop And Spacebar Motion Adjustment Are Not Controlling This Adjustment

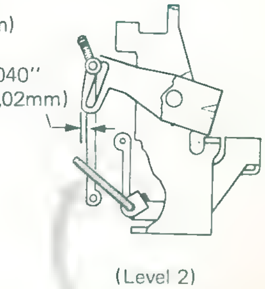
2. Index interlock link (Dual Pitch).



3. Index interlock paddle (Dual Pitch).



(Level 1)

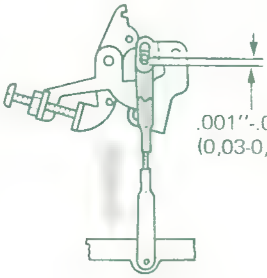


(Level 2)

(Continued On Next Page)

4. All index adjustments refer to APM adjustments.

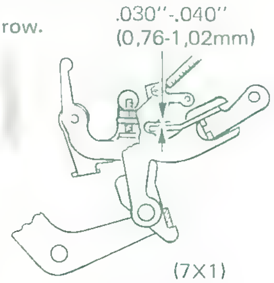
5. Spacebar link.



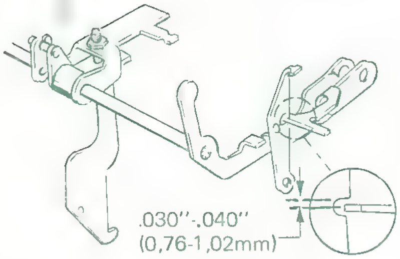
(Dual Pitch)

6. Latch height .001"-.015" (0,03-0,38mm) clearance between latches and bails with interposers released.

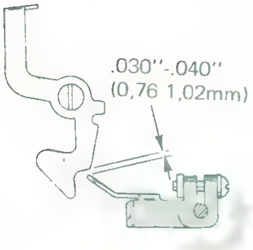
7. Carrier latch overthrow.



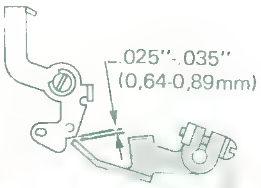
(7X1)



(Level 1 & 2)

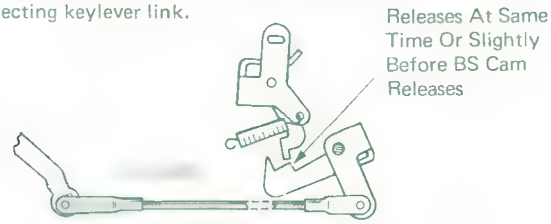


(Level 3)

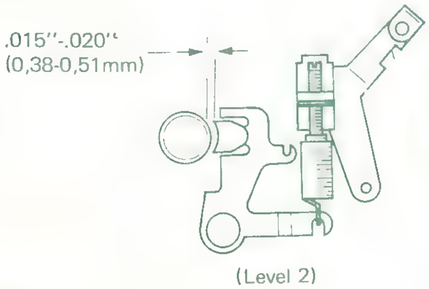


(Level 4)

8. Correcting keylever link.



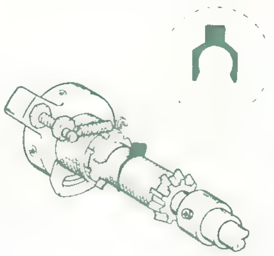
9. Carrier return shoe clearance.



(Level 2)

1 TORQUE LIMITER AND TAB GOVERNOR (10/68)

Simplified Adjustments: Position the carrier return pinion for proper gear engagement with the escapement drum. Insert the .005" (0,13mm) cycle shaft shim (P/N 1280822) between the CR pinion and the torque limiter arbor and push the torque limiter arbor up to the shim. Tighten the torque limiter setscrews. The proper adjustment is now made with a minimum of clearance and no binds. This same procedure can be used for adjustment of the tab governor pinion and collar.



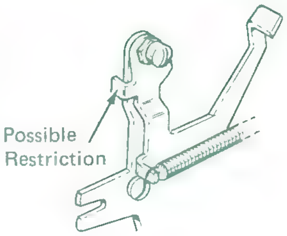
2 TORQUE LIMITER LUBRICATION (10/68)

The torque limiter may be lubricated without disassembly by placing grease on the end of the torque limiter spring in the grooves of the arbor. When this is completed, hold the carrier during a return operation. The spring will attract the grease, providing enough lubrication.

PAPER FEED

1 PLATEN LATCH ADJUSTMENT (1/71)

The platen latch adjustments should be checked when checking index or paper feed adjustments. The latch lug can bind off the latch and allow the platen to move up out of position, giving an uneven writing line and index failures.



2 PLATEN "WALKS" OUT OF LATCHES (1/71)

Platen Bushing Binding (12-22): Binding platen bushings may cause the platen to move out from the platen latches. Clean both the bushings and platen shaft and relubricate.

3 PLATEN DAMAGE (1/71)

If the platen is installed in the "Selectric" Typewriter without first installing the feed rolls and deflector, it is likely that the feed roll support arms will cut the rubber covering on the platen.

Platen damage can be caused by typing on the platen without an element on the machine. The rotate detent can make contact with the platen. This can also cause excessive rotate detent side play.

Internal platen damage can result if undue rotational pressure is applied on the platen knobs.

4 PAPER FEED "A-FRAME" (CEM 191) (1/74)

All "Selectric" and "Selectric" typewriters are being manufactured with a redesigned paper feed assembly. This paper feed uses an "A-frame" for support instead of tie rods.

The feed rolls may be removed from the "A-frame" in the following manner:

Carefully spread the feed roll arm assembly and remove the front feed roll. Pivot the rear feed roll toward the front and remove.

Removing the "A-frame" assembly will allow easy access to rotary backspace, escapement bracket and transport cords.

The "A-frame" is removed in the following way:

1. (SE II) Remove detent release lever and stud.
2. Remove the platen ratchet detent.
3. Remove the index link from the index pawl without changing the adjustment.
4. Remove index pawl overthrow stop.
5. (Dual Pitch) Disconnect half-backspace links, loosen half-backspace stop bracket nut and pivot bracket from under nut.
6. (Dual Pitch) Remove pitch cam cable from switch pitch sector gear.
7. Scribe the position of the multiple copy control detent plate; loosen the screw and pivot the plate from under the screw.
8. Disconnect both anchor springs. These springs connect the paper feed assembly to the power frame.
9. Lift the paper feed assembly at the rear; pull toward the rear of the machine and remove the assembly.

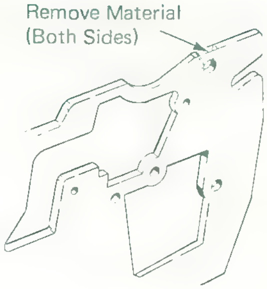
Estimated Removal And Installation Time: .1 hr.

The complete "A-frame" assembly can be installed on all level "Selectric" typewriters. To convert to "A-frame," order the appropriate assembly (22-228) and change B/M (22-229). These contain necessary parts and installation instructions.

For dual pitch machines below approximately S/N 8X3–1081654, 8X5–2095803, order half-backspace parts, 07-20, 61, 62, 63 and 19-57. For machines equipped with pinfeed platen, order bushing (49-115).

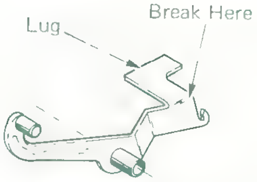
Estimated Conversion Time: .8 hr.

Installation Note: Below approx. S/N 7X1–5768765, 7X3–5184566,7X5–5535678 the power frame has a hole instead of a slot for the multiple copy shaft. To install the paper feed assembly, the multiple copy shaft must be removed and reinstalled in the holes or, the power frame must have material removed as shown (Fig. 1).



(Figure 1)

The part numbers for platen detent assemblies remain the same. Some earlier level detents may have a lug as shown (Fig. 2). In order to use with the "A-frame" paper feed, break off the lug.



(Figure 2)

5 PLATEN REMOVAL – CORRECTING "SELECTRIC" (CEM 210) (7/73)

The platen should only be removed when the carrier is positioned at least 20 spaces from either end. Removing it with the carrier closer to the ends may cause damage to the correcting mechanism.

6 PAPER BAIL (CEM 210) (7/73)

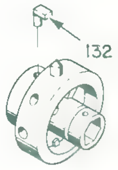
Some paper bail shaft screw holes may be out of line, resulting in paper not being held tightly against the platen.

7 PLATEN CORE KEY – PINFEED PLATEN (1/71)

A new key (49-132) to hold the platen core to the pinwheel.

If uneven line spacing occurs:

1. Remove roll pin from right-hand pinwheel assembly.
2. Install new nylon key in pinwheel assembly as shown in Fig. 1. The long side must point toward the pins.



(Figure 1)

NOTE: The key is slightly larger than the hole in the pinwheel. Use a hammer to install it.

3. If the keyway in the platen core is worn, a new core must be installed.

8 PINFEED PLATEN CORES – LEVEL 2 (CEM 105) (6/71)

The Level 2 platen cores are .018" (0,46mm) shorter than Level 1 cores when measured pin-to-pin. The new pinfeed platens have a hex shaft and the old pinfeed platens have a threaded shaft.

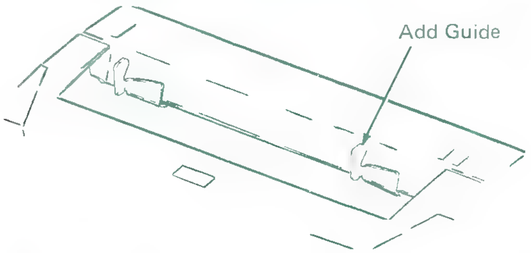
Should the core on an old level pinfeed platen need to be replaced, order a new level core, (49-117), PLUS ONE EACH of the platen shims (49-26). This gives the proper fit pin-to-pin.

9 ENDLESS FORMS (1/71)

On pinfeed platen machines where continuous forms are used, it is recommended that the forms be supplied from a table approximately the same height as the typewriter stand. The additional pull needed to feed the forms from the floor may make indexing critical to adjust.

1 CONTINUOUS FORM – LATERAL CONTROL TIP (10/68)

A second paper guide can be installed for continuous forms application to help control the lateral position of the forms.



2 PRINT SHIELD – REMOVABLE (CEM 1) (1/74)

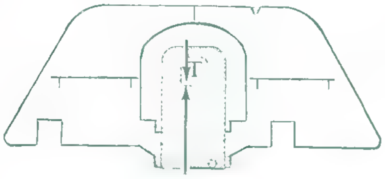
A print shield may be used to remove side printing or interference printing on the original (for carbon ribbon machines).

Use B/M 1175842 after ensuring that maladjustments are not causing the side printing condition.

Interference printing may reappear when the shield becomes worn. The shield will last approximately 30 ribbons. (The shield should be inspected on any service call and replaced if necessary to minimize the number of times an operator has to replace the cardholder and shield assembly.)

Adjustments:

1. Adjust for normal .010"-.015" (0,25-0,38mm) cardholder-to-platen clearance.
2. Adjust cardholder left or right and up or down for proper registration. A common cardholder for both the 10 and 12 pitch machines is used. This means that there will be 5 spaces between the registration marks for 10 pitch machine and 6 spaces for a 12 pitch machine.
3. On old-style film ribbon mechaisms, adjust the load lever link so the shield is against the platen when the ribbon is being installed.
4. Check for possible interference with the ribbon lift mechanism. **NOTE:** When the cardholder is adjusted for proper registration, the shield will be in the correct position.
5. Type an uppercase "T," backspace and type an underscore. The "T" should be in the center and the underscore approximately .020" (0,51mm) from the bottom of the hole (Fig. 1).
6. The shield actuating lever must be toward the front during normal typing operation and the shield must rest against the element. Fold the shield at the bottom if necessary to get this condition.



(Figure 1)

Operator Instructions:

Instruct the operator to push the gray positioning lever to the rear before installing an element. This will prevent the shield from getting under the element. During typing the lever must be toward the keyboard.

When the load lever of the film ribbon mechanism is activated, the shield will automatically be positioned to the rear. The ribbon must be installed in front of the shield.

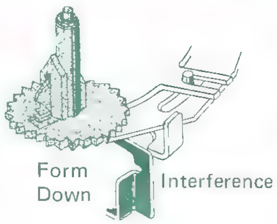
Show the operator how to remove and install the cardholder. (Have the operator try it.)

Leave the 4 additional cardholders with the operator.

FABRIC RIBBON

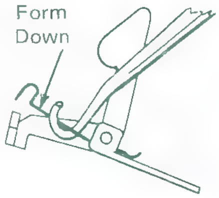
3 REVERSE FAILURE LIFT LEVER (10/68)

Intermittent ribbon reverse problems can be caused by interference between ribbon lift lever and ratchet check lever. This usually happens in the center and high lift positions. Form the ribbon position lever down to remove this condition.



4 RIBBON REVERSE INTERPOSER SPRING TENSION (10/68)

To minimize reverse failures on early level machines, the tension on the ribbon trigger springs must be increased. A quick, reliable way of doing this is to raise the spring with a spring hook as shown. The end can then be formed down.

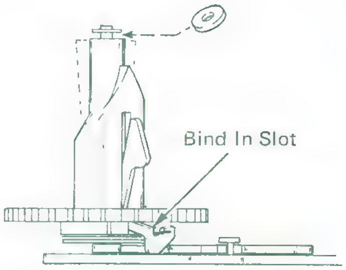


Also, intermittent ribbon reverse failure can sometimes be caused by the reverse interposer spring dragging on the rivet on which the reverse interposer slides. This may be fixed by removing the cut-off burr from the rivet.

Check the molded tenons on the ribbon cartridge to see that no interference exists between the molded tenons and the reverse lever which may cause reversing failures.

5 REVERSE FAILURES – TRIGGER BIND (10/68)

Some reverse failures are due to ribbon assemblies which are not long enough. This allows the reverse trigger to bind in the slot of the ratchet. To fix the problem, install a washer (PN 1175195) as shown.



6 REVERSE FAILURE BRAKE TENSION (10/68)

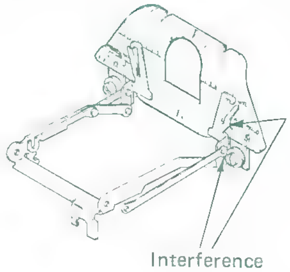
Uneven (light/dark) printing of the characters on a fabric ribbon near either end of the supply spools may indicate incorrect ratchet brake spring tension. These springs should be formed to drag on the ratchets enough to produce a tightly wound ribbon. If either spool winds loosely, the reverse trigger will be allowed to operate at different points along the ribbon toward the end of the ribbon, thus producing the light and dark pattern.

7 RIBBON TRACKING (1/74)

Power-on ribbon tracking can be easily observed on any fabric ribbon machine by placing a piece of correcting-type paper at the front side of the ribbon with the correcting side toward the ribbon. By typing a series of characters at each lift position, a visible, non-damaging indication of tracking results.

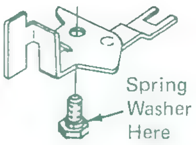
1 FABRIC RIBBON LIFT GUIDE — INTERFERENCE (10/68)

The free flight of the element may be limited due to interference between the lift guide and the card holder. This will usually affect low velocity characters on a stencil application.



2 RIBBON LOAD LEVER — EXCESSIVE VERTICAL MOTION (10/68)

Excessive vertical motion of this part may be unwanted by the operator. This may be corrected by installation of spring washer, P/N 1072477, between the stud and the lever.



3 RATCHET DETENT LEVER — REDESIGNED (10/68)

Ribbon reverse or feed failures may force the lugs of the ratchet detent lever under the ratchet. This will occur only after a reverse or feed failure. To prevent this double failure, the ratchet detent lever has been redesigned. The lugs of the ratchet detent lever have been extended .020" (0,51mm) higher and the detent lever mounting rivet has been modified to reduce end play.

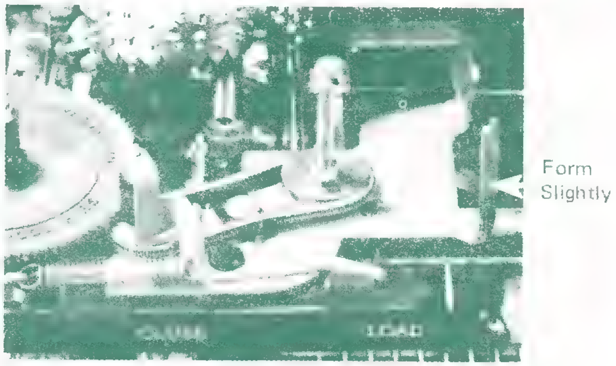
A field fix for this condition is as follows: Form the detent lugs up to ensure that the top of the lug remains at the top of the ratchet when all play is removed in the downward direction. After making this change, recheck adjustment of the ratchet detent lever lugs.

RIBBON – FILM

4 FILM RIBBON — FOLDING & TRACKING PROBLEMS (10/68)

When experiencing tracking problems with film ribbon "Selectrics" due to folding of the ribbon, check the following:

1. **Ribbon Plate Adjustment Tip:** When all adjustments are correct and the film ribbon fails to track properly, folds at the right guide, or contacts the take-up spool, the right front guide may need adjusting. Forming to the right will lower the ribbon; left, will raise it. Do not form too far to the left so that the lug contacts the spool.



2. **Lift Guide:** Film ribbon folding can be caused by a bending action of the ribbon lift guide assembly as a result of interference between the card holder mounting screw and the lift guide.
3. Ribbon tracking and folding can be affected by a dirty and sticking shock spring sleeve. Keep the sleeve and wire clean.
4. **Shock Spring:** Ribbon folding may be fixed by reducing the tension of the shock load extension spring. **Caution:** The tension of the spring must be enough to positively detent the shock load spring into the supply spool ratchet teeth or uneven feed will result. Also, be sure the shock spring angle is correct.

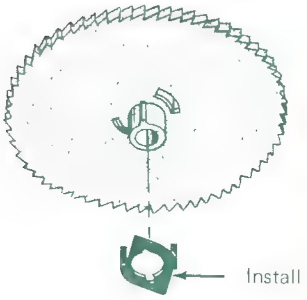
5 SHOCK SPRING ADJUSTMENT TIP 10/68

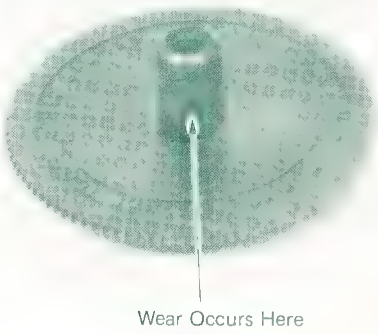
The small formed part of the shock spring that extends to the left from under the mounting screw head can be used for holding the spring in the adjusted position while tightening the screw.

The small loop on the end of the shock spring has been turned so the loop faces to the left. This was done to prevent the ribbon from slipping off when installing the ribbon.

6 RIBBON FEED FAILURE (10/68)

The locking rib on the film ribbon supply spool may wear on machines used on automatic operation, causing ribbon feed failure. A clip (P/N 1173585) may be installed to correct this condition.





1 FILM RIBBON CHANGES (10/68)

Fabric to film ribbon changes are recommended only for machines equipped with stick-shift and dual impression.

2 SPRING, LIFT LINK (FABRIC TO FILM RIBBON CHANGE) (10/68)

Disconnect the lift link when changing a fabric ribbon to a film ribbon machine. Lift adjustments cannot be made if this spring is connected. Also, an overlapping pattern will result if this spring is connected.

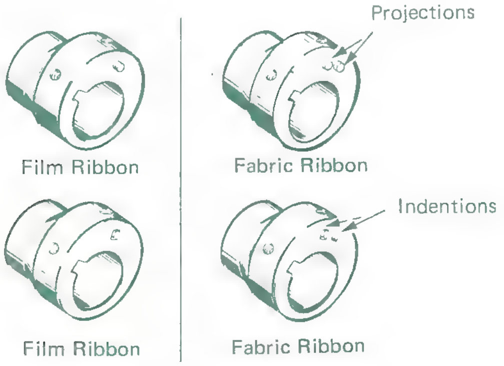
3 COMPATIBILITY OF FILM AND FABRIC RIBBON CAM FOLLOWERS (10/68)

Film ribbon machines now use the same ribbon lift cam follower (P/N 1124663) as fabric ribbon machines. When installing B/M 1272420, Fabric to Film Ribbon Change, it will be unnecessary to change the follower as instructed in the installation instructions.

4 RIBBON FEED AND DETENT CAMS – IDENTIFICATION (1/71)

The fabric ribbon feed and detent cam can be identified by either two square indentions or two rounded projections.

The film ribbon feed and detent cam is identified by one square indention or one round projection.



RIBBON – SELECTIVE

5 PRINT QUALITY – TECH III (CEM 143) (2/72)

Some print quality problems have been caused by oil on the ribbon. Remember this possibility. If necessary, clean excessive oil from the carrier and the ribbon mechanism. The assembly line is now using less oil in these areas.

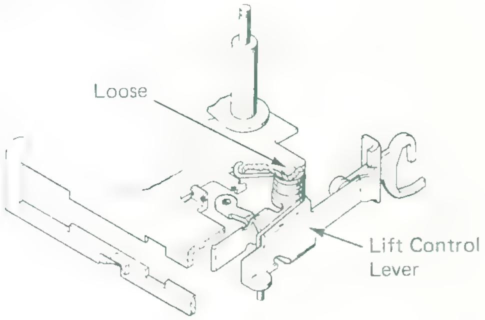
6 RIBBON LIFT FAILURES– SELECTIVE RIBBON (CEM 125) (10/71)

Intermittent ribbon lift failures can be caused by improper print shaft timing.

If experiencing this problem, ensure the print shaft is timed within specification.

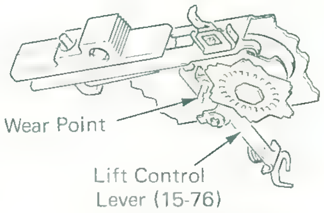
7 LIFT CONTROL LEVER MOUNTING POST – LOOSE (CEM 225) (10/73)

If experiencing intermittent ribbon lift failures with the selective ribbon system, check the mounting post of the lift control lever (15-76). If loose, replace ribbon plate assembly (15-151), P/N 1206661, or (26-106) P/N 1206210.



8 LIFT CONTROL LEVER STUD – WEAR (CEM 294) (7/75)

If experiencing intermittent ribbon lift failures with the selective ribbon system, check the lift control lever stud (15-76) for wear. (Stud can be easily observed with machine in stencil position.) Replace lift control lever, P/N 1206583, if necessary.



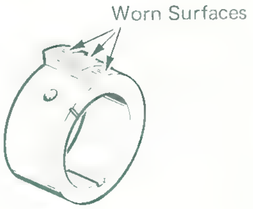
(Bottom View)

Recovery Code Expired 7-15-76

9 RIBBON LIFT AND TRACKING FAILURES (CEM 275) (12/74)

Some "Selectric" II typewriters may have reached the field with a soft ribbon lift cam (15-17), P/N 1206694, (26-56), P/N 1206058.

When experiencing ribbon lift or tracking failures, check the lobes of the cam for excessive wear. Replace the cam if necessary.



The failure is more visible when using film or correctable film ribbons as the characters overlap between lift positions, leaving voids on the paper.

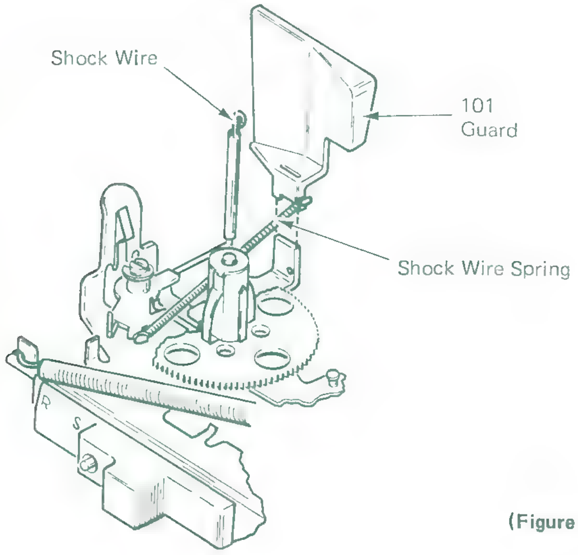
See frame 265 in "Selectric" APM for proper alignment of cam to print sleeve flat.

Recovery Code Expired 12-1-75

1 GUARD – SELECTIVE RIBBON (CEM 214) (8/23)

Tech III and film ribbons will break when not properly installed around shock wire.

To prevent operator from incorrectly installing Tech III or film ribbon on selective ribbon machines, install guard as shown in Figure 1. Hold ribbon plate with finger when pressing down guard. Hook shock wire spring to lug on guard.



(Figure 1)

Parts Required:

MECH/REF		PART NO.	DESCRIPTION
715	101	1205632	Guard – Selective Ribbon

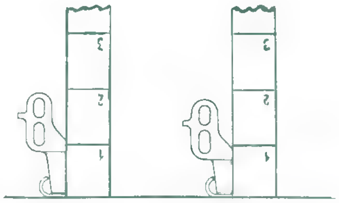
Recovery Code
Expired 8-21-74

2 SELECTIVE RIBBON SPREAD PLATE – REDESIGN (CEM 299) (12/75)

Symptom: The slots in the spread plate have been made longer to make the adjustments easier.

Solution: Replace spread plate (15-22). This plate is stronger and has a shorter lever extension.

Adjustments: Remain the same.



Parts Required:

MECH/REF		PART NO.	DESCRIPTION
15	22	1206055	Spread Plate

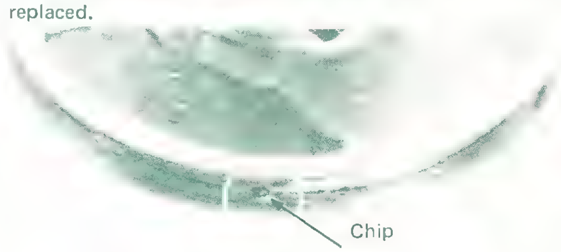
Note: It is necessary to replace adjusting plate (15-24) on machines below 8X3-1070370 and 8X5-2085674.

SELECTION

3 ROTATE TAPE BREAKAGE (10/68)

The following are helpful diagnostic aids:

1. Tape off the tape guide – If a broken tape appears to shine at the break area and there are wear marks or shine marks on the inside of the trunnion, most likely the tape broke because it was not properly installed over the tape guide.
2. Malselection or popping latches – Malselection of some kind will almost always occur before the tape breaks. In other words, a warning signal of either bad alignment or malselection will occur before tape breakage.
3. Foreign material or chips in the rotate pulley – This can be recognized by inspecting the short end of the tape which will measure very close to 5-3/4" (146,05mm). It will have a very clean break and will show no signs of wear marks. The material can be very small.
4. Interlock failure or excessive pull on the tape – A tape that is broken due to excessive tension will tend to curl at the broken area.
5. Off pulley or kinked – Such tapes can usually be identified because they will either be wound around the pulley or arm, or be damaged from kinks or bends.
6. Foreign material in rotate pulley – If a rotate tape is broken approximately 5"-6" (127,0-152,4mm) from the "T" end, a piece of foreign material in the rotate pulley is the most probable cause and the pulley must be cleaned thoroughly with IBM cleaning fluid or replaced.



4 ROTATE PULLEY – TAPE ALIGNER LIFTING OUT OF PULLEY (CEM 117) (9/71)

Malselection is possible if the T-end of the tape anchor rises and slips to the rear of the T-slot in the pulley. It is also possible that the tape anchor may come completely out of the pulley.

Replace the pulley.

Parts Required:

MECH/REF		PART NO.	DESCRIPTION
702	420	1121196	Pulley, Rotate

Recovery Code
Expired 10-1-72

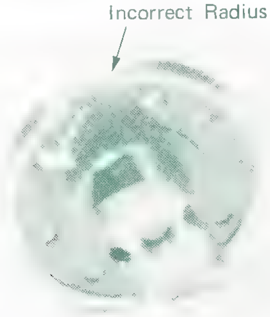
5 ROTATE ALIGNMENT – SETTING THE BALANCE ARM (10/68)

The balance arm adjustment can be properly made only if the —5 latch is properly adjusted. However, when using the cancelling procedure to observe and adjust the balance arm ("T" home against +5/—5 selection), it is good to observe the detent entry for +1 and -1 positive position. If the -1 should appear excessively negative or positive, then the balance adjustment should be remade to bring -1 to its normal (slightly negative) position.

NOTE: Balance adjustment cannot make up lost motion caused by maladjusted selector latch stop.

1 ROTATE TAPE BREAKAGE – BAD ROTATE PULLEY (1/71)

Due to a defect in the radius of the rotate pulley on some machines, rotate tapes may break within 1/4" (6,35mm) of the "T." On machines where this occurs, replace the pulley.



2 MACHINE CHECK WHEN TAPES ARE FOUND BROKEN (10/68)

Rotate Tape:

1. Rotate detent clearance (is detent actuating lever roller on).
2. Gear train backlash, tight bond between gears and their hubs.
3. Print shaft timing.
4. Shift interlock adjustments.
5. Shift arm moving out in straight line; not parallel to carrier.
6. Rotate arm not parallel to carrier.
7. Defective rotate arm and shift arm pulley.
8. Any bind that affects free rotation of the element.
9. Tape guide worn, loose, or missing, or adjusted so tape engages leading edge or trailing edge.
10. Burrs on any area the tape travels.
11. Negative latch clearance not enough.
12. Latch links adjusted too long/too short.
13. Latches slip from bail during operation.
14. Latch angle, parts quality.
15. Foreign material blocking the movement of the tape.
16. Interference between tilt and rotate pulleys.
17. Latch bail shaft worn (RH), loose or shifting, not parallel.
18. Burr on rotate pulley.
19. Inteference from:
    a. Selector latch spring/latch.
    b. Rotate eccentric stud/paper bail spring.
    c. Rotate arm/damper spring.
    d. C/R cord/rotate spring.
20. Binding, sticking, broken rotate spring.
21. Binding tape element (tilt ring spacer, back-up plate).
22. Shift arm/cord tension, pulley bracket.

Tilt Tape:

1. Detent to tilt ring clearance.
2. Burrs on the tilt pulley (where tape comes off pulley).
3. Any bind that affects free tilting of tile ring.
4. Foreign material in sector gears.
5. Print shaft timing (affects rotate mechanism more).
6. Tilt pulley spring off or broken.

3 ROTATE TAPE "T" REMOVAL (1/71)

You may find the 224 tweezers helpful to remove the rotate tape "T" from the rotate pulley. These tweezers are also helpful when handling other small parts.

4 ROTATE TAPE REPLACEMENT (10/68)

The following procedure can be used for easy installation of the rotate tape:

1. Half-cycle the machine with the type element on.
2. If a carbon ribbon machine, remove rocker shield.
3. Manually withdraw the rotate detent and use the type element to wind the rotate spring approximately 3-1/2 turns or until the slot for the tape is accessible at near 3-1/2 turns.
4. Allow the rotate detent to reenter. It will hold the position of the head and rotate pulley.
5. Insert the tape anchor into the pulley and thread the eye end through the rotate arm, shift arm, and on to the anchor in the right of the carrier.
6. Allow the shift arm to drop down and take up slack in the tape.
7. Hold the type element and turn the print shaft to remove the detents. Control the type element to allow the rotate spring to slowly wind the tape as you guide it correctly around each of its pulleys.
8. Half-cycle the machine to a lowercase "m" and check for proper rotate spring tension. Check homing and other adjustments as necessary.

5 TILT TAPE REPLACEMENT (10/68)

Replacement of the tilt tape is made easier if the following procedure is used.

1. Half-cycle the letter Z.
2. Manually withdraw the detent lever.
3. Rotate the type element counterclockwise one or two teeth, more it to a three tilt position, and allow the detent lever to bottom in the tooth.

The only reliable way is to hand cycle using the cycle wheel.

6 TAPE INSTALLATION (PRE-GEARLESS TILT (10/68)

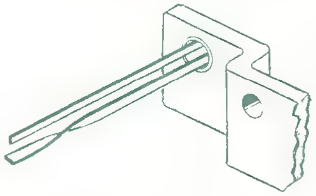
When installing the rotate tape (mechanically crimped), difficulty may be experienced when feeding the "T" end of the tape between the rocker and the tilt pulley. To work around this problem, a small amount of metal may be filed off the "T" anchor to provide more clearance. The eyelet end of the tape may also be threaded through the carrier and the tape pulled through, stopping the need for working the "T" around the pulleys.

7 7X5 ROTATE TAPE CAN BE USED ON 7X1, 7X3 (10/68)

The Model 7X5 rotate tape can be used on the Model 7X1 and 7X3 if necessary. When it is used, it requires readjusting the homing, rotate arm motion, rotate arm eccentric stud and shift motion.

8 ROTATE TAPE INSTALLATION (10/68)

Rotate tapes should be installed so that when the rocker is in print position, the twist in the tape is at a maximum. The top of the tape should be to the front when coming out of the rocker shaft.



9 FINE TIMING ADJUSTMENT (10/68)

The following is the easiest, fastest procedure for adjusting fine timing on "Selectric" typewriters (normal time, 60 seconds).

1. Loosen print shaft gear.
2. Hand cycle the letter M until check pawl latches at half-cycle position.
3. Manually rotate the print shaft, observe rotate detent entering and beginning to be removed. Stop rotation where the rotate detent is removed halfway from slope of tooth skirt.

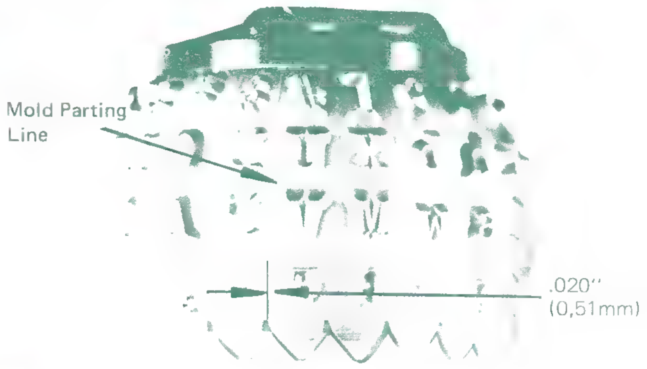
4. Continue hand cycling operation until the type element begins to rotate.
5. Tighten the print shaft gear.

NOTE: A burred print shaft may cause this procedure to fail. If previous fine timing adjustments have scored or burred the print shaft, remove the print shaft gear and rotate it one tooth in either direction to get to a good surface of the print shaft.

CAUTION: Maintain .002"-.005" (0,05-0,13mm) print shaft end play.

1 TYPEHEAD HOMING (10/68)

When adjusting fine homing of the type element, the mold parting line on the element can be used as a gauge of .020" (0,51mm). Although it is recognized that the parting line does not come into the correct tooth in all cases (i.e., the "M"), the line can be used as a reference to gauge .020" (0,51mm) motion when detenting in most teeth.



2 TIMING ADJUSTMENTS (10/68)

Some customer engineers may be checking detent entry and withdrawal by hand cycling with the print shaft. This procedure (because of gear backlash, etc.) will result in an incorrect reading and should be discontinued.

3 TIMING PROBLEMS (10/68)

When experiencing repeated malselection, broken tapes, escapement and uneven impression, check for a tight bond between metal hubs and their nylon bodies. Also, slippage between parts can throw machines out of time very slightly until a failure occurs.

Mark the hub and gear, then run the machine and recheck the marks for alignment.

4 TILT DETENT ENTRY ADJUSTMENT (10/68)

The tilt detent entry may be adjusted without cover removal by removing the platen and using a 5/16" spinner wrench to loosen the locking nut. Then the adjusting screw may be turned with a springhook or longnose pliers.

5 TILT PULLEY SPRING SERVICEABILITY TIP (10/68)

When the tilt pulley spring is disconnected from the tilt pulley, it may be hooked onto the detent actuating lever. This will prevent the left end of the spring from coming unhooked.

6 LH TILT PULLEY STUD WEAR (10/68)

In those cases where tilt adjustments have changed, or where tilt tapes have broken, check the LH tilt pulley stud for excessive wear on the barrel-shaped part. An incorrect finish was applied to some of these studs which may cause excessive wear. Replace if necessary.

7 DIFFERENTIAL BRACKET ASSEMBLY – LOOSE (1/74)

When differences in band width cannot be corrected through normal adjustment, look for a loose or broken differential assembly mounting stud. A loose nut can result in intermittent malselection and tape breakage.

8 NEGATIVE 5 LATCH ADJUSTMENT (10/68)

If the negative latch clearance is readjusted, be sure to check the overlap of the latch on the head of the stop screw. The head of the stop screw may be out-of-round and turning the screw may change the overlap.

9 ROTATE LINK ADJUSTMENT (1/74)

After adjusting the rotate link and tightening the locknuts, ensure that there are no binds at the rotate link pivot points. This may be checked by moving the link front-to-rear and observing some link motion on the pivot studs. This will ensure that the flat ends of the rotate link are parallel to the flat ends of the rotate arm and rotate bellcrank.

10 POPPING SELECTOR LATCHES (10/68)

Popping latches can be caused by:

1. Selector latch links too short.
2. Selector latch springs binding on latches.
3. Selector latches not vertical.
4. Excessive lost motion in the selector bails.
5. Selector latch links too long.
6. Angle too large in bail plate hook.

The above adjustments have caused popping latches in the past and must be checked for proper adjustment.

Before replacing a popping tilt or rotate latch assembly, try cleaning the pivot points with cleaning fluid and relubricating.

Also clean a replacement assembly before installing. Foreign material has been found on some of these assemblies.

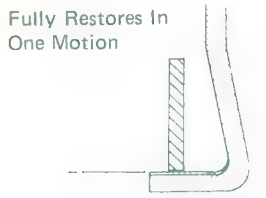
Selector latches manufactured with too large an angle in the formed area which hooks under the bail plate may cause intermittent latch popping, which could result in malselection, a broken tape, or compensator roller drop.

It is very hard to visually detect a bad latch by looking at the angle. A suggested way for locating the bad latch is as follows:

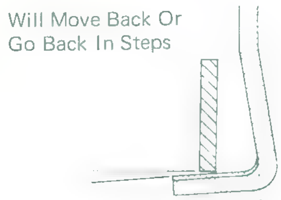
1. With the power off, select the –5 rotate, "0" tilt character ([), and with the turning wheel, run the cycle through by hand until the cycle clutch slips. This will place all the latches against the bail plate ready to restore under the plate.
2. With the machine on its back, again select the –5 rotate, 0 tilt character ([). Very slowly start the next cycle by hand. The selector latches may now be observed restoring under the bail before they begin the next cycle. The following should be observed as the latches restore.

(Continued On Next Page)

a. A good latch will fully restore in one motion.
b. A bad latch will move slowly back under the bail. It may take two or more steps to fully restore, depending on how slowly the machine is cycled. This indicates that the working face of the latch is angled away from the bottom of the bail plate. If such a condition exists, the bad linkage assembly must be replaced.



Good Latch



Bad Latch

1 REPLACING BROKEN SELECTOR LATCH LINKS (10/68)

A new way of replacing broken selector latch links has been developed and may save time. The new procedure is:

1. Remove the clevis from the selector latch link.
2. Push the link through the square hole in the power frame, from the rear, and through the hole in the selector latch.
3. Install the clevis and attach it to the selector interposer.

This procedure is recommended in place of the procedure which requires removal of the motor.

2 CYCLE CLUTCH PULLEY REPLACEMENT (10/68)

1. Position the carrier to the right.
2. Remove the cycle clutch latch by loosening the top screw and removing the bottom screw. When replacing, use Hooverometer head set on the no. 3 scribe line.
3. Remove the rotate link.
4. Remove the cycle clutch check latch and spring.
5. Disconnect the latch bail spring, pull out latches, drop bail down.
6. Remove two screws and stud holding cam shaft bearing plate and remove.

It may be necessary on some machines to remove the compensator from its mounting bracket. If so, follow steps 7 and 8.

7. Loosen print shaft gear, rotate head counterclockwise to loosen tape and rotate print shaft to detent head.
8. Remove compensator mounting shaft.
9. Work out cam shaft (clean, lubricate and/or replace the clutch spring).
10. Remove the balance arm stud.
11. Remove the rotate bellcrank (if the bellcrank is not countersunk on the back side, countersink or replace).
12. Remove belt.
13. Remove pulley.

Replace in reverse order and check the following:

1. Cam shift end play.
2. Gear backlash.
3. Balance arm.
4. Filter shaft timing.
5. Escapement cam and spacebar cam timing.
6. Shift interlock cam.
7. Print shaft timing.
8. Homing.
9. Belt tension.

3 CYCLE CLUTCH SLIPPAGE (10/68)

Slow keyboard operation can be caused by the cycle clutch spring slipping or the sleeve binding. This condition may be noticed during repeat underscoring. The following area should be checked if this occurs:

1. Excessive cycle shaft end play — End play should be .002"-.006" (0,05-0,15mm).
2. Oil on spring — the proper lubrication for the spring is IBM no. 23 grease. Any oil on the spring will allow slippage; the spring must be removed and completely cleaned with IBM cleaning fluid. Care should be taken to remove all oil from the cycle shaft reservoir area and the cycle pulley hub also. The clutch spring should be relubricated thoroughly with IBM no. 23 grease.
3. Incorrect adjustment of cycle clutch spring.
    a. Opening the spring too soon will cause slippage.
    b. The cycle clutch spring should be adjusted left or right to maintain .005" (0,13mm) clearance between the spring and pulley hub. Excessive clearance will not allow enough engagement of the hub, causing slippage. Too little clearance will cause the spring to bind against the pulley hub and overload the clutch release train, causing sluggish keyboard reaction as well as noisy idling.
    c. The cycle clutch collar should be adjusted left or right to allow a minimum of .008" (0,20mm) end play of the clutch sleeve. Too little play of the sleeve can result in wrong readings of the cycle shaft end play (where the sleeve play substitutes for the shaft play) and a direct mechanical drive connection between cycle pulley and shaft. This latter condition will prevent complete closing of the cycle spring and result in slippage.

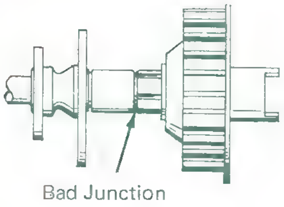
4 CYCLE CLUTCH ADJUSTMENT (10/68)

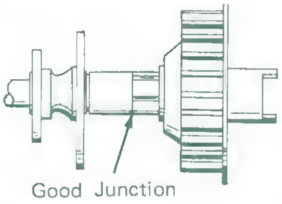
1. Leave the right-hand dust shield in place while performing the power-on adjustment. This will remove the danger of the bristol wrench being thrown out of the machine due to its coming into contact with the torque limiter hub. Rotation of the cycle clutch pulley and drive belt is not a hazard as there are no exposed projections which could throw the bristo wrench out of the machine.
2. Modify the shift stop packing grommet (P/N 7340540 or 7340541) by removing a small part of material from each side. The Hooverometer can be inserted into the cycle clutch latch link to prevent accidental cycling of the machine while performing the power-on adjustment of the cycle clutch.
3. Turn machine on, position the cycle clutch collar screw up, then position the carrier into the right-hand margin to prevent cycling of the cycle shaft.
4. Loosen cycle clutch clamp screw and advance print shaft (top to rear).
   CAUTION: Do not release the cycle clutch with the bristol wrench in the clamp screw.
5. At this time, check the lateral position of the cycle clutch spring. Expand cycle clutch spring by pushing the left-hand side of the spring with a springhook. The lateral position of the spring can be changed by pushing left or right for proper adjustment with the cycle pulley.
6. Rotate the print shaft a complete cycle (top to rear) until the cycle shaft pawl drops in. Back the cycle shaft up against the check pawl.
7. Position the overthrow stop for .007"-.015" (0,18-0,38mm) and tighten the clamp screw. This will give approximately 1/2 tooth of motion to"unwrap" the spring in its rest position. Observe this motion at the print shaft gear.
   NOTE: This procedure will also apply to the former-style cycle clutch if the two overthrow stop screws are loosened first.

5 CYCLE CLUTCH SPRING WEAR (10/68)

Machines which have slow keyboard action, uneven impression and/or other symptoms of cycle clutch spring wear may begin to appear as early as two to six months after installation. Before replacing the cycle clutch spring, be sure to check the condition of the edge of the cycle pulley arbor. A rounded edge (see drawing) will give the same results as excessive shaft end play — even end play may be within tolerance .002"-.006" (0,05-0,15mm).

When a rounded cycle pulley arbor is found, it will be necessary to replace the pulley as well as the spring for a lasting correction. A rounded edge is easily found by reinserting the cycle shaft without the clutch spring into the machine and observing both arbors where they meet.





1 CYCLE CLUTCH – EXTRA CYCLES (CEM 311) (9/76)

If experiencing extra cycles, check that the cycle clutch latch shock absorber (21-526) has not slipped from between the latch (21-524) and guide assembly (21-530). Clean excessive grease from shock absorber if necessary.

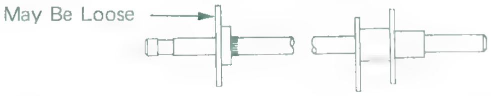
2 CYCLE CLUTCH RESTORING ADJUSTMENT (10/68)

An easy way of adjusting the restoring cam roller is as follows:

1. Loosen the restoring cam roller nut and allow the roller to drop free.
2. Hand cycle the machine until the roller is on the high point of the cam.
3. Place the pusher end of a large springhook between the cycle clutch latch pawl and the keeper. (Insert the springhook through the hole in the right-hand side of the keyboard and over the switch leads to hold it in place.)
4. Place the machine on its feet and hold the roller firmly against the cam while tightening the locking nut.
5. Remove the springhook and check for the proper clearance of .020"-.025" (0,51-0,64mm) between the latch pawl and the keeper, on the cam lobe providing the smaller clearance.

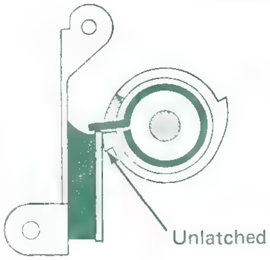
3 CYCLE SHAFT – LOOSE CAMS (CEM 211) (7/73)

Some "Selectric" typewriters have reached the field with loose cams on the cycle clutch shaft. When experiencing malselection problems, check to see that the cams are right and in the proper position.



4 CYCLE CLUTCH ADJUSTMENT TIPS (10/68)

When installing the modified cycle clutch assembly, be sure to unlatch the cycle clutch when adjusting for proper overthrow. Failure to unlatch the cycle clutch will allow rotational movement of the cycle clutch spring when the clamp is loosened. This will cause the drive position to change.



CAUTION: When installing the modified cycle clutch spring, be sure the longest extension of the spring is to the left. If the spring is installed incorrectly, it is possible for the extension to hang up on the cycle clutch latch, keeping the cycle clutch from unlatching.

5 UPPER IDLER GEAR BACKLASH ADJUSTMENT – 30 SECONDS (10/68)

1. Loosen the upper idler gear stud and print shaft gear.
2. Manually prevent the lower idler gear from turning.
3. Manually rotate the print shaft gear. This has the effect of "walking" the upper idler gear into position between the upper and lower gear.
4. When the correct position is reached, tighten the idler gear stud without allowing it to "walk" back to its previous position.

SHIFT

6 SHIFT DRIVE – ADJUSTMENT CHECK (10/68)

The shift clutch spring brake adjustment and proper overthrow stop adjustments can easily be checked by manually holding the detent roller away from the shift cam. After completion of either shift cycle, allow the detent roller to contact the shift cam. The detent roller should not rotate the cam more than 1/32" in either direction when the detent roller is fully bottomed in its cam detent notch.

7 SHIFT CLUTCH SPRING ADJUSTMENT (10/68)

1 To 3 Minutes:

1. Install shift clutch spring; allow the retaining plate screws to remain loose.
2. Place shift cam in uppercase position and hold in detented position.
3. Install clutch ratchet (uppercase position) so that its lug is toward the front of the machine and in front of the release arm lug.
4. Manually rotate the ratchet (clockwise) until the shift release arm lug now lies directly under the center of the clutch ratchet lug. The shift clutch spring and retaining plate will slip to a new position.
5. Remove the clutch ratchet and, without changing the setting, tighten one screw in the retaining plate. Do not allow the cam to become undetented.
6. Now reinstall the clutch ratchet, using the same spring hole as was previously used, and place it against the shift release arm (manually lock down the shift keybutton).
7. Set the overthrow stop clearance .010"-.025" (0,25-0,64mm) and tighten the other retaining plate screw.

8 SHIFT RELEASE LINK INCOMPATIBILITY (1/71)

A small number of machines were shipped with special studs mounted on the right-hand keyboard side frames. These required use of modified shift release links to provide the necessary clearance. Should there be occasion to replace these shift release links, the interfering studs may be removed to allow use of the standard release links.

9 SHIFT BACKUP ROLLER – ADJUSTMENT CHECK (10/68)

If the machine is locked up because the shift clutch spring loop is caught between the arbor and the cam, the backup roller adjustment should be checked. It has been found that a maladjusted shift backup roller allows the right-hand operational shaft bearing to be cammed in, thus increasing the clearance between the shift arbor and cam. This condition can be observed by observing the bearing for movement to the left when shifting to uppercase. The pusher end of the large springhook may be used as a wrench to easily adjust the shift backup roller eccentric shaft.

10 SHIFT ARM ROLLER WEAR (CEM 252) (4/74)

When taking a call as a result of malselection and no problem can be located, don't overlook the possibility of a worn shift arm roller. In most cases reported to date, wear of the roller has been caused by a rough finish on the shift cam. Replace cam along with roller if necessary.

1 SHIFT BEARING RETAINER PLATE ASSEMBLY (1/74)

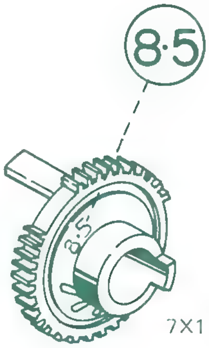
There have been three levels of the shift bearing retainer plate. The original was a die cast plate which is identified by its light gray color. The next level was a black punch-pressed plate with a removable bearing. The third and present level is a black punch-pressed plate with a non-removable bearing. This plate, P/N 1174331 (which includes the backup roller and retainer), is the only one available. The plate assembly is compatible with both the black plastic and steel cam. The white plastic cam is no longer available on machines with the white plastic cam, if either the cam or the bearing needs to be replaced. If replacement of the die cast plate is required, replace plate — reference (16-31), P/N 1174331, arm — reference (16-105), P/N 1175258, shaft — reference (16-52), P/N 1175261, two (2) C-clips — reference (16-102), P/N 1092125, spring — reference (16-104), P/N 1128303, screw — reference (16-101), P/N 1128356, nut — reference (16-100), P/N 38051 and spacer — reference (16-114), P/N 1091220.

2 SHIFT RATCHET IDENTIFICATION (CEM 145) (3/72)

The 7X1 shift ratchet (P/N 1174482) can now be identified by the marking 8.5. This marking was chosen because the 7X1 typewriter has an 8.5" (216mm) writing line.

The XX3, XX5 shift ratchet (P/N 1174439) has no markings.

Note: Before, the 7X1 ratchet was identified by a silver colored release lug. These ratchets may be in stock and should still be used. (723's and 725's have a black release lug.)



7X1 Ratchet

SPACEBAR

3 SPACEBAR FAILURE TO RELEASE (10/68)

Failure of the spacebar to release may be caused by the cam release lever having too much overlap on the clutch wheel. The stop pad on the operational bracket may be formed to provide less overlap.

4 SPACEBAR FAILURE — ESCAPEMENT TRIGGER NOT RESTORING (1/71)

Spacebar failure can be caused by a maladjusted escapement cam or excessive back-up of the cycle shaft.

As the cycle cam shaft is stopped by the cycle clutch sleeve, it may bounce back. This in turn causes the filter shaft to rotate backward. If the filter shaft rotates backward enough due to gear backlash, the escapement cam will not be properly timed. The escapement cam roller will not be resting on the low part of the escapement cam. This may prevent the escapement trigger from restoring after a character operation.

To check, rotate the filter shaft counterclockwise (looking at the gear) and operate the spacebar. Spacebar failure indicates a maladjusted escapement cam or excessive gear backlash. Do not use turning wheel.

Caution: Rotate the filter shaft gear by the hub only.

5 INTERMITTENT SPACEBAR FAILURES (1/74)

Intermittent spacebar failures may be caused by the spacebar interposer (17-1) slipping to the side of the spacebar latch (17-300). This can also cause the latch spring (17-7) to come off.

This condition may be corrected by carefully forming the interposer to center it on the latch. Steps have been taken in the plant to correct this problem.

6 SPACEBAR INTERLOCK INTERMITTENT OR INOPERATIVE (10/68)

Some failures have been caused by not enough tension of the spacebar lockout spring. A check for this condition can be made by half-cycling any character and manually withdrawing the interlock from its active position. This check will indicate whether enough spring tension is available to pull the interlock fully into its active position.

Note: The interlock may APPEAR to work reliably with the machine tilted up on its back, yet fail when the machine is placed in its normal typing position.

7 SPACEBAR BINDS (10/68)

In some cases failure of the spacebar to restore may be caused by the BS and CR repeat bail spring being attached too far to the left on the spacebar equalizing shaft screw. This will allow the coil of the spring to bind on the equalizing shaft.

8 SPACEBAR STIFF (1/71)

A spacebar that is hard to depress may be due to burrs on the operational interposer latch plate. Turn the plate over if burrs are on the latch side of the plate.

1 SPACEBAR INTERPOSER SPRING – INSTALLATION (10/68)

The spacebar interposer spring should be hooked in the top hole of the interposer to stop repeat operation.

2 SPACE TO PRINT B/M INSTALLATION – EARLY LEVEL MACHINES (10/68)

If it is necessary to install the Space to Print B/M 1274214 on machines before approximate S/Ns 7X1 – 4133735, 7X3 – 4754535, and 7X5 – 4418324, also order and install B/M 1269569 so the link in B/M 1274214 may be attached to the interposer.

TAB

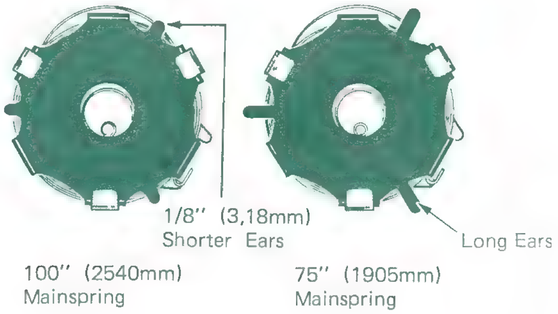
3 TAB TORQUE BAR BINDING (10/68)

The extension on the left-hand side of the deflector may come in contact with the part of the tab torque bar to which the tab link attaches. This will cause the tab lever pawl not to latch out. To stop this condition approximately 3/32 of an inch should be cut off the extension. After cutting, use a file to remove all sharp corners.

4 MAINSPRING IDENTIFICATION (1/74)

"Selectric" Typewriters may have either a 75" (1,905mm) or 100" (2,540mm) mainspring. The 75" (1,905mm) mainspring should be wound only five (5) turns with carrier at far right.

The 100" (2,540mm) mainspring should be wound (7) seven turns with the carrier at far right.

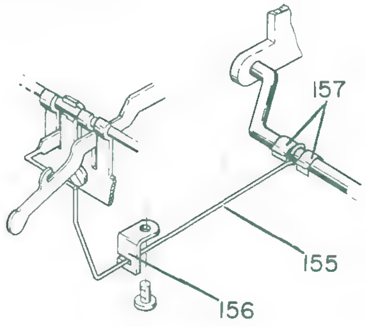


5 TAB KEYLEVER LINELOCK – FIELD INSTALLATION B/M (CEM 163) (5-72)

Most over-cleared and over-set tab stops are caused by the tab being actuated and the tab rack being rotated when the machine is turned off.

To prevent over-cleared and over-set tab stops, install B/M to prevent tab operation when switch is off. Attach guide (18-156) to link (18-155) before installing. Disengage left end of linelock bail to install link.

ADJUSTMENTS: Form the link (18-155) to not interfere with the tab keylever when the machine is on and to not allow the tab to be actuated with the machine off.



200–TAB KEYLEVER LINELOCK

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.
718	155	1287429	Link	1
	156	1287430	Guide	1
	157	1138464	Clip	2
	200	1287431	B/M, Tab Keylever Linelock	

CEM Customer Engineering Memorandum

IBM *Office Products Division Customer Engineering ● "IBM", "Executive", IBM "EXECUTARY" and "Selectric" are registered trademarks of the International Business Machines Corp.*

"Selectric" Typewriter

7XX [21] 8XX [26]

Form No. 241-5114-1
Printed In USA (Revised) May, 1979

0 COMBINED SERVICE INFORMATION

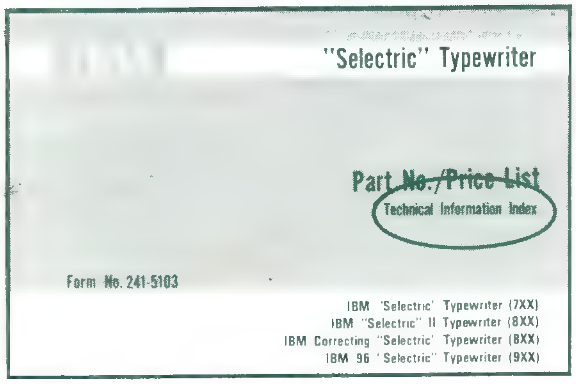
This Combined Service Information (CSI) booklet will always be labeled CEM No. "0." It replaces the "Safety And Service Information" booklet, F/N 241-5516-4, dated June, 1975 and "Combined Service Information booklet, F/N 241-5114-0, dated May, 1978.

The Combined Service Information comes from the "Safety And Service Information" booklet and from CEMs published before the current CEMs starting on page 1. CEM No. "0" should always be filed in front of current CEM pages to make up a complete CEM package.

This publication is to be used with the "Technical Information Index" (TII) (Fig. 1) printed in the "Selectric" Part Number/Price List, F/N 241-5103. The TII will indicate the page and item number of each piece of information printed in this booklet.

The following is an explanation of the features and use of the TII and CEM No. "0" (Combined Service Information — CSI"). The samples used are designed to show a sequence and will not necessarily match current publications.

Technical Information Index (TII)



IBM

"Selectric" Typewriter

Part No./Price List

Technical Information Index

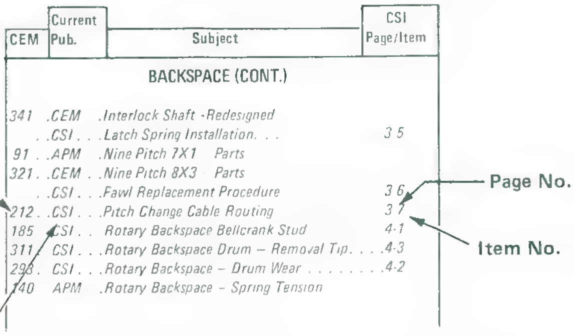
Form No. 241-5103

IBM "Selectric" Typewriter (7XX)
IBM "Selectric" II Typewriter (8XX)
IBM Correcting "Selectric" Typewriter (8XX)
IBM 96 "Selectric" Typewriter (9XX)

TII Sample

Figure 1

CEM: Original CEM number of the printed information. If this column is blank, the original CEM number is not available.



CEM	Current Pub.	Subject	CSI Page/Item
		BACKSPACE (CONT.)	
341	CEM	Interlock Shaft - Redesigned	
	CSI	Latch Spring Installation	3 5
91	APM	Nine Pitch 7X1 Parts	
321	CEM	Nine Pitch 8X3 Parts	
	CSI	Fawl Replacement Procedure	3 6
212	CSI	Pitch Change Cable Routing	3 7
185	CSI	Rotary Backspace Bellcrank Stud	4-1
311	CSI	Rotary Backspace Drum — Removal Tip	4-3
293	CSI	Rotary Backspace – Drum Wear	4-2
140	APM	Rotary Backspace – Spring Tension	

CURRENT PUB.: The location of the current information. If "CSI" is in this column then the far right column labeled "CSI page/item" will indicate the page number and item number of this information in this publication (CSI). If "CEM" is in this column, the information is in a current CEM and the CEM column indicates the current CEM number. If "APM" is in this column, the information is in the parts section or the adjustment section of the Adjustment Parts Manual. (F/N 241-5939)

(See Page And Item Samples For Explanation)

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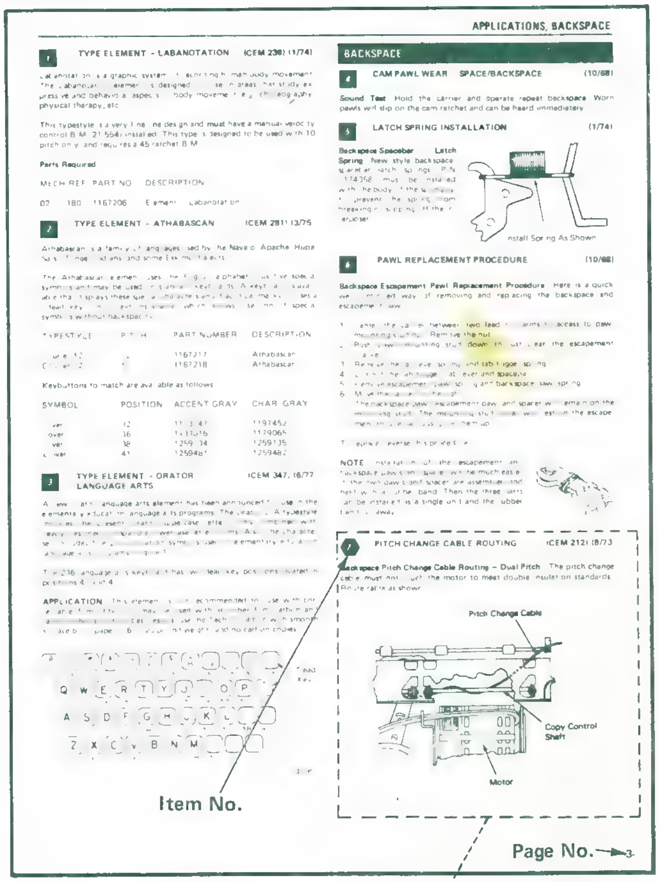
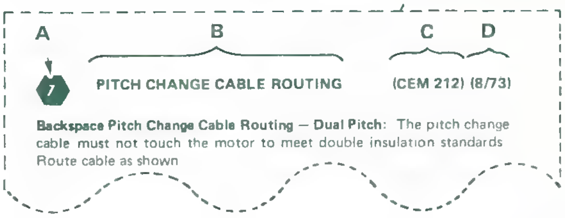
Page Sample





Backspace Pitch Change Cable Routing — Dual Pitch: The pitch change cable must not touch the motor to meet double insulation standards Route cable as shown

A. **Item Number:** This number corresponds to the number shown in the TII and is used to locate the information. The number will appear in a CEM category symbol to indicate the type information contained. (See General Section, "CEM" Category Symbol — Explanation.") On reliability items, an expiration date will be shown. This number will start with "1" on each new page.

B. **Subject.**

C. **CEM Number.** If the information was originally published in a CEM, the number(s) of the CEM(s) will appear in parentheses in this area. If this area is blank, the information was printed in a publication other than a CEM.

D. **Date Published.** This date is the date the information was sent to the field.

GENERAL

■ CEM CATEGORIES – EXPLANATION (1/76)

The arrangement of Product CEMs has been made easier. Application categories have been removed and the types of engineering changes have been reduced.

Product CEM Categories Are:

A. ⬢ Safety

1. Purpose – The purpose of the safety CEM is to communicate product safety changes to ensure safe operating and service conditions.
2. Coverage – Safety CEMs will apply to all specified equipment.
3. Conditions – Usually, safety changes will be made on a normal service call if the unsafe condition exists. If the need is high (e.g. possible electrical short), the CEM will have a completion date to ensure quick attention.

   Parts and labor will be available at no charge to all customers (Service Agreements, IBM-owned, self-service, competitive service and per call).

   Safety CEMs will indicate an expiration date at the time of publication. Non-Service Agreement accounts will be charged per call for parts and labor after expiration date.

   Safety CEMs will use service codes as assigned.

B. ● Reliability

1. Purpose – The purpose of the Reliability CEM is to communicate additions or substitutions of parts, or a change in adjustment procedure required to bring a machine, component or supply level consistent with quality standards set by IBM and/or meet original functional and service performance specifications.
2. Coverage – This CEM applies to all specified equipment and supplies.
3. Conditions – Reliability CEMs will be applied to equipment when the specified set of failure conditions exists within a specified range. Usually, this CEM will be applied during a normal service call or preventative maintenance visit on Service Agreement and IBM-owned equipment.

   If requested, IBM will provide per call, self-service and competitive service accounts with parts and labor at no charge only if:

   The service call was caused by the malfunction in the CEM and the machine is in the correct serial range,
   or
   While on a call on the same machine, a check for symptoms indicates that a possible failure condition exists.

   Reliability CEMs will indicate an expiration date at the time of publication. Non-Service Agreement accounts will be charged per call for parts and labor after expiration date.

   Reliability CEMs will use service codes as assigned.

C. ■ Service Information

1. The purpose of the Service Information CEM is to.

   Communicate changes in design of parts, or in adjustment procedures which are the result of continuing engineering activity for product improvement.

   Communicate manufacturing changes which improve assembly or manufacture of equipment or supplies, or improve their serviceability.

   Communicate product feature changes designed to extend the capabilities, usefulness, or saleability of the existing product line.

   Communicate service tips, service procedures, tool information, and other information.
2. Coverage – Service Information CEMs will apply to all specified equipment and supplies.
3. Conditions – Usually, action indicated in a Service Information CEM will be performed on a normal service call or preventative maintenance visit.

   Any parts and/or labor, referred to in the Service Information CEMs will be billable to self-service, per call, and competitive service accounts. Applicable service codes will be used on IBM-owned and Service Agreement equipment.

   Service Information CEMs will be deleted as soon as the information is included in a permanent form numbered publication, i.e., parts manual, service manual, tool catalog, etc.

   Service Information CEMs will use any number of warranty or nonwarranty service codes as assigned. Normally, no recovery codes will be used after the new equipment warranty has expired.

PRODUCT CEM INSTALLATION GUIDE

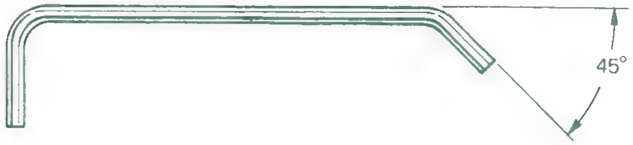
Safety	Reliability	Service Information
Parts and labor available at no charge to ALL customers.	Under certain conditions, parts and labor available at no charge to ALL customers.	Per call to all non-Service Agreement customers. No charge for parts and labor to Service Agreement customers. Install as needed on IBM equipment.
Use assigned service code.	Use assigned service code.	Use applicable service code

1 OPERATIONAL KEYBUTTONS — DAMAGE (CEM 311) (9/76)

It is possible to damage some of the operational keybuttons if the "Selectric" Typewriter is stored on its back. Caution should be exercised if this storing condition is used.

2 FRONT FEED ROLL ADJUSTING SCREWS AND CYCLE CLUTCH COLLAR ACCESSIBILITY (1/74)

For easy access to these two adjusting screws, form the no. 10 6-flute bristol wrench (P/N 9900103) as shown in the drawing. The wrench can be formed using a vice.



3 COPPER COLORED SCREWS (10/68)

Copper coloring of screws and/or nuts to indicate a left-hand thread is an industry standard.

4 SMALL LOCKNUTS ONTO ADJUSTABLE BRISTOL SCREWS (10/68)

When replacing locknuts on bristol adjusting screws, first insert the bristol into the head of the adjusting screw. Slide the locknut over the top of the bristol wrench and down onto the bristol screw. The locknut may then be turned onto the bristol screw without the danger of losing it.

5 SKIRT CLEARANCE ADJUSTMENT — ACCESSIBILITY (CEM 311) (9/76)

The 7/32 - 3/16" wrench, P/N 9900208, may be formed to help access the lower adjusting nut (02-526), which should be loosened to make the skirt clearance adjustment (APM, frame 52).

6 BRITTLE SPLINED WRENCHES, NO. 2, 6 FLUTE (P/N 9900216) (CEM 114) (9/71)

Some splined wrenches have been reported to be brittle due to manufacturing defect. These wrenches may break when torque is applied.

These wrenches can be identified by a light rusty color and have a dry appearance. The replacement wrenches are black in color and have a light oil coating.

7 POWER CLEANER — P/N 9900469 (CEM 90) (1/71)

Under full stalled conditions with power applied, it is possible for the power cleaner, P/N 9900469, to start a fire. This condition must exist for more than five minutes for open flames to result.

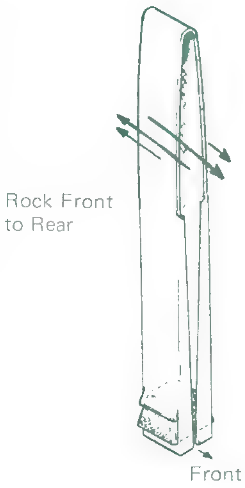
Under no conditions is the power cleaner to be left on unattended or stalled with electrical power applied.

8 KEYBUTTON REMOVAL TOOL USE (10/68)

The keybutton removal tool, P/N 9900373, should be used as shown in the drawing. A drop of oil on the keylever, upright lug, will help in replacing the keybutton.

This should not be done in cases where loose keybuttons are a problem, i.e., automatic letter writing machine, etc.

Attach Druite® paper or similar abrasive paper to the keybutton removal tool to prevent slippage. A contact glue can be used to stick the material to the handle.



APPLICATIONS

1 TYPE ELEMENT – ORATOR (10-68)

The Orator element is designed basically for speech-writing applications. It is recommended for single copy work only because of the size of the characters. Interference printing may occur on single copy work.

This type element is not recommended for manifolding, stencil, offset or spirit masters. It is also not recommended for correcting applications.

2 TYPE ELEMENT – DUAL GOTHIC 72 (10-68)

This typestyle is subject to cutting or embossing and is **not** recommended for use where embossing could be a problem.

3 TYPE ELEMENT – OPTICAL SCANNING, 1428 (10-68)

Machines using the 1428 Optical Scanning type element continuously should have the low velocity vane lug for position No. 42 removed. The "$" used in that position requires high velocity selection, and an inhibitor mechanism was provided for that purpose.

Removal of the No. 42 lug will permit the inhibitor to be removed. Except for the No. 42, all other low velocity positions will operate as designed, providing increased platen life, since punctuation marks will no longer indent the platen surface to cause voids in character coverage.

Removal of the No. 42 lug is performed as follows: Remove the inhibitor selector lever and switch lever. Remove the carrier return keybutton. Lock down the shift keys. Reach through the open area to break off the exposed No. 42 lug with a T-bender or similar tool. Reassemble and check functions. If desired, the low velocity selector lever, link, bellcrank and spring may be removed to remove the need for operator control.

Note: These instructions do **not** apply to machines using the keypunch trainer OCR element, Farrington Scanner element, or 915 element.

4 NEW TYPESTYLES – BOOKFACE ACADEMIC AND PRESTIGE PICA (CEM 178) (9/72)

Two new boldface type elements (Prestige Pica and Bookface Academic) are now available.

These new elements do not have a guide slot and they will not fit on machines manufactured before September 1, 1972.

Existing machines may be changed to accept the new elements by installing a spring biased tilt ring assembly (2-335), P/N 1287435.

The typestyle line weight of these elements is slightly more narrow than that produced by similar typestyles on IBM Typebar models.

5 TYPE ELEMENT – LABANOTATION (CEM 236) (1/74)

Labanotation is a graphic system of recording human body movement. The Labanotation element is designed for use in areas that study expressive and behavioral aspects of body movement, e.g., choreography, physical therapy, etc.

This typestyle is a very fine line design and **must** have a manual velocity control B/M (21-554) installed. This type is designed to be used with 10 pitch only, and requires a 45-tooth ratchet B/M.

6 TYPE ELEMENT – ATHABASCAN (CEM 281) (3/75)

Athabascan is a family of languages used by the Navajo, Apache, Hupa, Sarsi, Tlinget Indians, and some Eskimo dialects.

The Athabascan element uses the English alphabet plus five special symbols and may be used on standard keyboards. A keyboard is available that displays these special characters and diacritical marks. It uses a "dead key" (not field installable) which allows insertion of special symbols without backspacing.

TYPESTYLE	PITCH	PART NUMBER	DESCRIPTION
Courier 12	12	1167217	Athabascan
Courier 72	10	1167218	Athabascan

Keybuttons to match are available as follows:

SYMBOL	POSITION	ACCENT GRAY	CHAR. GRAY
' over ,	32	1133247	1197452
: over .	36	1133016	1179065
, over '	38	1259134	1259135
L over I	41	1259481	1259482

7 TYPE ELEMENT – ORATOR LANGUAGE ARTS (CEM 347) (6/77)

A new Orator language arts element has been announced for use in the elementary education language arts programs. The Orator L/A typestyle includes the present Orator uppercase letter forms combined with newly designed compatible lowercase letter forms. Also, the character set includes five pronunciation symbols used in elementary education language arts programs (Figure 1).

The 236 language arts keyboard has two dead key positions located in positions 41 and 43.

APPLICATION: This element is not recommended for use with correctable film ribbon. It may be used with all other film carbon and fabric ribbons, but for best results use the Tech III ribbon with smooth surface bond paper (16 to 20 pound weight) (60-75g/sq. m) and no carbon copies.

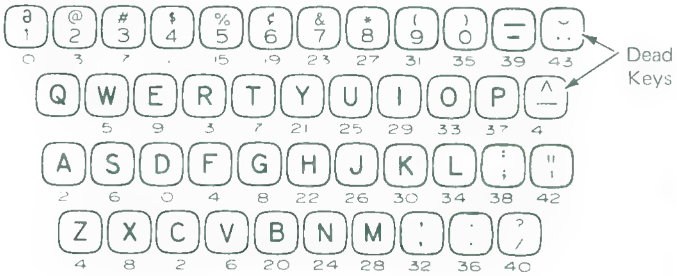


Figure 1

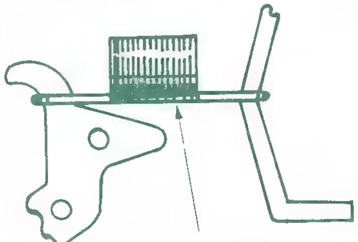
BACKSPACE

1 CAM PAWL WEAR – SPACE/BACKSPACE (10/68)

Sound Test: Hold the carrier and operate repeat backspace. Worn pawls will slip on the cam ratchet and can be heard immediately.

2 LATCH SPRING INSTALLATION (1/74)

Backspace-Spacebar Latch Spring: New style backspace-spacebar latch springs (P/N 1174058) must be installed with the body of the spring up to prevent the spring from breaking or slipping off the interposer.



Install Spring As Shown

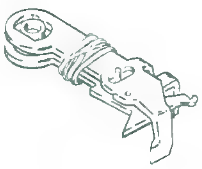
3 PAWL REPLACEMENT PROCEDURE (10/68)

Backspace-Escapement Pawl Replacement Procedure: Here is a quick well-controlled way of removing and replacing the backspace and escapement pawl.

1. Center the carrier between two feed roll arms to access pawl mounting stud nut. Remove the nut.
2. Push pawl mounting stud down to just clear the escapement bracket.
3. Remove the tab lever spring, and tab trigger spring.
4. Lift out the tab trigger, tab lever and spacer.
5. Remove escapement pawl spring and backspace pawl spring.
6. Move the carrier to the right.
7. The backspace pawl, escapement pawl and spacer will remain on the mounting stud. The mounting stud collar will rest on the escapement torque bar. Just pick them up.

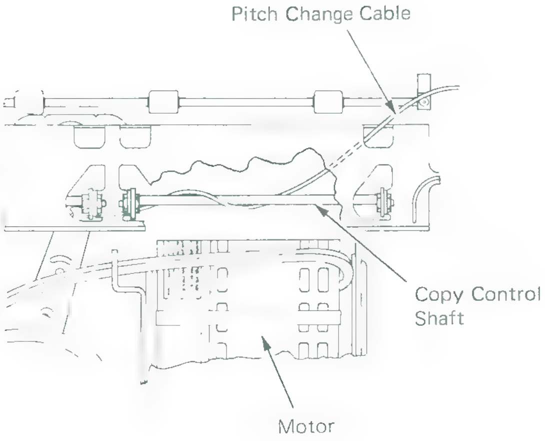
To replace, reverse this procedure.

NOTE: Installation of the escapement and backspace pawls and spacer will be much easier if the two pawls and spacer are assembled and held with a rubber band. Then the three parts can be installed as a single unit and the rubber band cut away.



4 PITCH CHANGE CABLE ROUTING (CEM 212) (8/73)

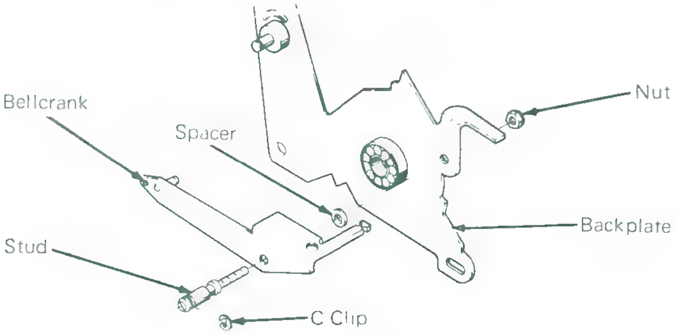
Backspace Pitch Change Cable Placement – Dual Pitch: The pitch change cable must not touch the motor to meet double insulation standards. Place the cable as shown.



5 ROTARY BACKSPACE BELLCRANK STUD (CEM 185) (10/72)

Field Fix: When experiencing backspace failures due to broken bellcrank mounting stud, the following field fix may be used.

1. Remove bellcrank mounting stud from backplate by hitting lightly.
2. Remove grip clip from stud and remove stud from bellcrank.
3. Insert new stud (24-152) (P/N 1115859) in bellcrank with threaded part to rear.
4. Install C-clip on front of stud and washer over threaded end.
5. Install stud through hole in backplate and tighten with nut.

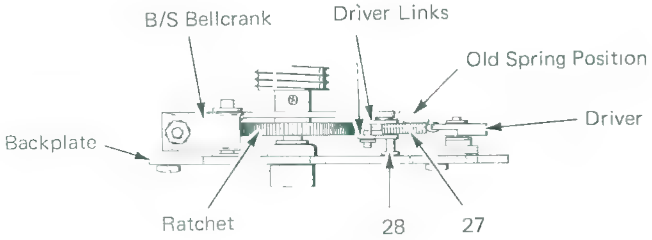


6 ROTARY BACKSPACE DRUM WEAR (CEM 293) (7/75)

Redesigned Parts: To stop excessive wear and breaking of ratchet teeth (24-6) due to incorrect alignment of the driver (24-32).

A redesigned stud and spring are available and can be installed on any "Selectric" rotary backspace mechanism. The stud replaces stud (24-28) and is installed from the rear of the machine through the driver and lower driver link hole. The stud operates against the back plate (24-1). The spring replaces spring (24-27). Install the small loop end of the driver and the long loop end to the driver link mounting stud between the two links (24-29). DO NOT INSTALL THE SPRING IN B/S BELLCRANK HOLE.

Ensure driver to ratchet clearance is .030"-.040" (0,76-1,02mm). Apply a thin film of no. 23 grease on the back plate where the stud contacts.



(Top View)

Recovery Code Expired 8-15-76

7 BACKSPACE DRUM – SERVICE HINT – ROTARY BACKSPACE (CEM 311) (3/76)

The rotary B/S drum and ratchet asm. (24-6) can be removed through the hole in the bottom of the frame by removing the B/S bellcrank upstop (24-116) and the C/R shoe mounting bracket (03-500). This removes the need to remove the B/S plate (24-1) when changing the ratchet and drum asm. (This procedure will not work on machines manufactured before dual transport system.)

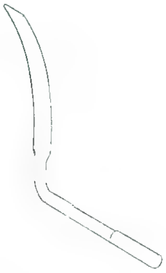
8 INTERLOCK SHAFT (CEM 202) (4/73)

Redesigned – "Selectric" II: The index to backspace interlock shaft (24-20) for dual pitch "Selectric" II typewriters has been redesigned to remove a binding condition.

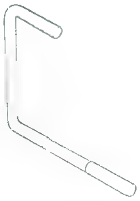
(Continued On Next Page)

An index during a normal backspace operation will occur when interlock fails to operate.

Replace the interlock with new level part. Part number remains the same.



Old Level



New Level

1 DRIVE LINK SPACER (CEM 188) (11/72)

Drive Link Spacer — Removed — (RB/S): Drive link spacer (24-33) has been removed to prevent a bind between the backspace bellcrank and the driver links. If this condition is present, remove the spacer.

2 HALF BACKSPACE — REDESIGNED — LEVEL 3 (CEM 272) (1/76)

To relieve a "bias" torque on the escapement rack.

A torsion spring (07-48) now replaces the compression spring (07-103). The cam and lever angles (07-107 & 106) have also been changed to reduce breakage. This was a level 2 redesign.

The new spring mounts on the left side escapement torque bar backup stud (07-13) and a notch cut in the escapement rack (07-10). This notch makes this level rack incompatible with earlier racks, so when changing over to this new level it will be necessary to change both the rack and the spring. The same is true for the cam and lever; they must both be changed when either is changed on level 1 machines. Cam and lever are level 2.

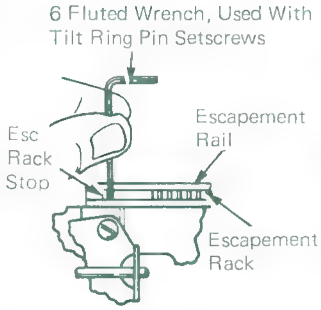
The escapement rack pitch selection gear (07-23) has also been redesigned with a longer stop lug. This eliminates the need for the stop spacer (07-108). When installing this new style gear, it will be necessary to remove the spacer.

Note: If level 3 control bracket (07-20) part number 1206847 is used, it will be necessary to use the entire torsion spring level half-backspace mechanism.

The earlier level 2 bracket (07-20) part number 1204505 will work with the torsion or compression spring levels.

1. With the escapement rack in the 12 pitch mode, adjust the escapement rack gear (07-23) flush against (no clearance) the cam level (07-107).
2. With the rack still in 12 pitch, position the setscrew (07-111) in the escapement collar (07-105) to the front of the machine and adjust the collar left-to-right against the stop lug on the escapement rack control bracket (07-20) after moving the escapement rack approximately .045" to the left.

   The .045" adjustment can be made by inserting a 6 fluted wrench (used to adjust the tilt ring setscrews) between the right end of the escapement rack and the stop pin in the right end of the escapement rail (Figure 1).



View Is Looking At The Back Of Machine On Left End

Figure 1

3. Adjust the operating lever link (07-112) for proper operation within the top cover slot.

3 BACKSPACE CAM FOLLOWER (NRB/S) — REDESIGNED (CEM 302) (11/75)

To provide a stronger backspace on NRB/S machines, the side frames of the backspace cam follower have been redesigned (Figure 1).

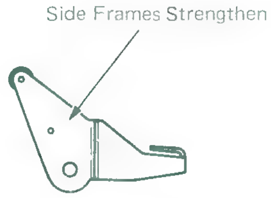


Figure 1

SYMPTOM: The backsapce mechanism may allow enough flexing of its components to cause loss of motion to the backspace rack, resulting in a stuttering or unreliable backspace operation.

Install the new backspace cam follower with stronger side frames (25-202).

Plant installed above approx. 7X1-304000, 8X3-1520000 and 8X5-2825000.

CARRIER & ROCKER

1 PRINT QUALITY (CEM 304) (11/75)

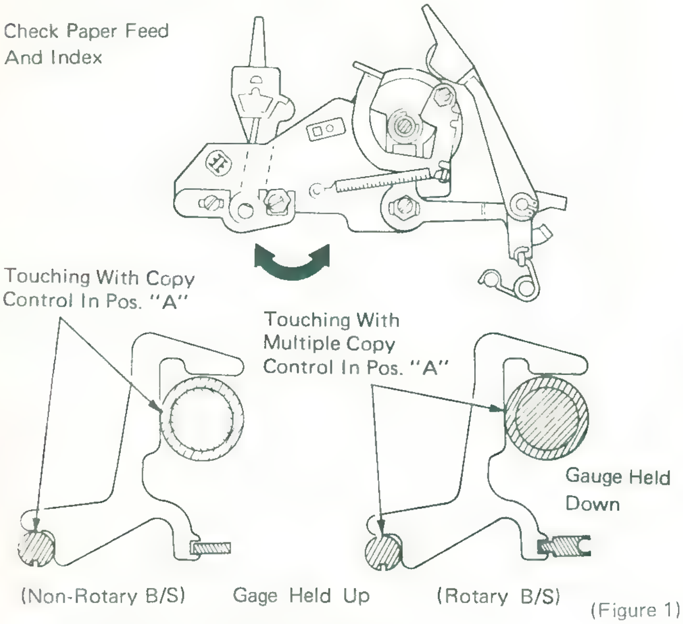
Use the following procedure when experiencing overinking and/or fill-in using correctable film ribbon.

This condition can be reduced by making the following checks and adjustments:

a. Check the application! For best results, use a 16-20 lb. (60-75 g/sq. m) smooth surface original with less than three copies.

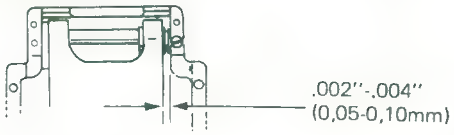
b. Adjustments:

1. Platen front-to-rear (Fig. 1).



(Figure 1)

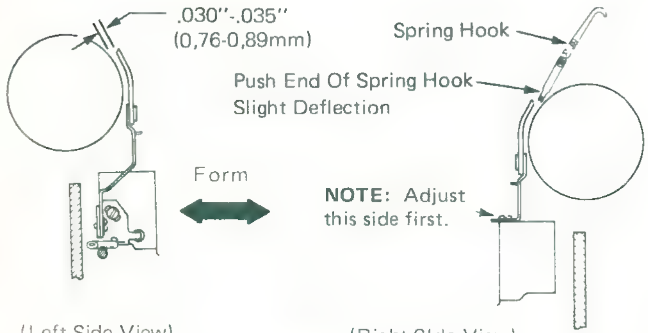
2. Platen height — Even top and bottom
3. All rotate and tilt homing adjustments
4. Rocker shaft end play (Fig. 2)



(Top View)

(Figure 2)

5. Rotate and tilt detents — Minimum side play, no binds
6. Cardholder — (Note: These clearances should only be used to correct machines experiencing fill-in with the correctable film. The previous adjustment applies to all other machines. See Fig. 3.)

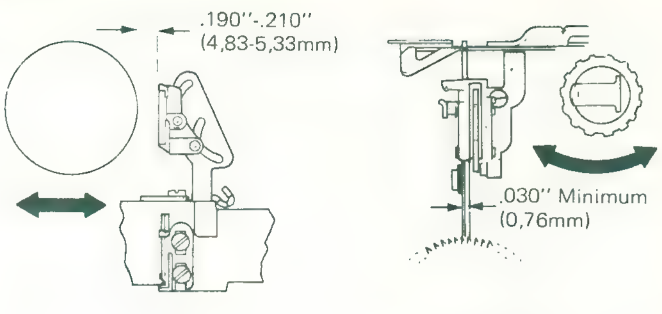


(Left Side View) (Right Side View)

(Figure 3)

Ensure cardhold is .030"-.035" (0,76-0,89mm) at writing line.

7. LH ribbon lift guide (Fig. 4)



(Left Side View) (Top View)

(Figure 4)

8. Escapement timing — escapes just after print.

c. If the application is not recommended for use with the correctable film ribbon, and the above adjustments do not produce desired results, suggest Tech III cover-up.

2 PRINT QUALITY (10/68)

When print smearing occurs, a possible cause could be a defective detent cam follower (02-501). Check for the following:

1. Follower bracket adjustment. The bracket should be parallel with the print sleeve. The cam follower lug should be .005" (0,13mm) from the print sleeve. With the Hooverometer on the detent cam, the height of the follower should be adjusted so the top of the upper part of the lug is in line with the No. 1 scribe line.
2. The front-to-rear motion of the follower should be no more than the thickness of the detent actuating lever. Excessive play in the stud will change the detent timing and cause smearing.

If an out-of-parallel or excessive play condition is found, replace the follower. Pay particular attention to making the correct adjustments.

Other areas to check include powered and free flight, platen position, and timing of the shafts.

3 IMPRESSION VARIATIONS (10/68)

It is possible to get higher than normal impression if the print cam follower slips off the low velocity cam during a print cycle. Proper DI cable adjustments will prevent this from happening.

4 IMPRESSION VARIATIONS — BROKEN PRINT CAM FOLLOWER (10/68)

Uneven, blurred impression and uneven, smeared underscore may result from a broken print cam follower. (Follower roller mounting pin breaks on LH side.)

5 ALIGNMENT AND IMPRESSION VARIATIONS (10/68)

The following adjustments should be checked when having alignment and/or impression problems. Follow the sequence exactly to ensure previously set adjustments are not changed.

1. Upper ball socket fit in the bore of the tilt ring. If it appears to be in excess of .002" (0,05mm) on a problem machine, the tilt ring assembly should be replaced.
2. Fit of the upper ball socket between its flange and the tilt ring spacer. If up and down motion can be observed, the shims are too large. A stone may be used to reduce their thickness.
3. Tilt detent sideplay. Adjust the detent pivot and the detent guide screws for no sideplay without binding.
4. Tilt ring sideplay and homing. No sideplay — no binds and proper tilt homing.

(Continued On Next Page)

5. Rotate detent sideplay. Both the rear and front guides should have no sideplay – no binds.
6. Detent cam and cam follower. If either part is worn or maladjusted, it can cause the tilt detent to bounce under powered operation resulting in alignment and/or impression differences. Position the detent cam follower bracket front-to-rear for a clearance of .005"-.015" (0,13-0,38mm) between the follower pin and the print sleeve. Maintain the adjustment as close as possible to the .005" (0,13mm) side of the tolerance. (Make sure the pin will not jam in the print sleeve keyway and that the bracket is parallel to the print sleeve.) In addition to the front-to-rear adjustment, the vertical adjustment is equally important. The brackets should be adjusted up or down to align with the no. 1 scribe line of the Hooverometer as it rests on the detent cam. Adjust the detent cam left-to-right for .001" (0,03mm) motion of the follower (machine half-cycled) and the actuating lever height for proper skirt clearance.
7. Rear carrier shoe. Ensure that the carrier has the silver colored adjustable shoe or the current non-adjustable shoe.
8. Rear carrier shoe clearance. Minimum – no binds.
9. Carrier shoe clearance. Minimum – no binds.
10. Gear train backlash. Must be checked at several points during a cycle. On 713-23 and 715-25s, the upper idler gear should have enough backlash to allow for the slight bending of the print shaft when the carrier is printing near the center of the platen. Check for backlash while applying some upward pressure on the centered carrier.
11. Check for proper end play of the cycle shaft and the operational shaft.
12. Cycle clutch adjustments. Poor adjustments of the drive or restoring cam overthrow can produce variations in the drive which affect fine timing. A worn cycle clutch spring could also produce the same results.
13. Homing and bandwidth. Normally, this is only considered in connection with horizontal alignment, but the impression could be the FIRST thing affected.
14. Print shaft timing. Slight contact as detent comes out of tooth.
15. Check proper shifting of the dual impression roller on the print cam. (This can be checked by manually holding the dual impression follower or latch in one velocity position while making a strike-up.) Adjust the print cam follower stop screw for .020" (0,51mm) between the follower roller and the print cam. If the print cam follower is too close, the follower roller may bounce from the first low dwell to the second low dwell.
16. Platen position. Adjust the platen with platen gauge, P/N 9900519, both vertical and horizontal. Readjust the vertical position for even color density on top and bottom of characters. It is important that the platen be parallel to the print shaft.
17. Yoke position. The "H" and "M" should be used to determine the proper position of the yoke. If this adjustment is changed, it will be necessary to check typehead homing and skirt clearance.
18. Free flight and power travel. With the impression control set at position 4, .260"-.270" (6,60-6,86mm) (foot of Hoovermeter plus 2 or 3 tab cards) should exist between the platen and the letter "Z." Free flight should be adjusted for .030"-.035" (0,76-0,89mm).
19. Cardholder. Adjust for .005-.015" (0,13-0,38mm) clearance of the platen.

Other possible causes that affect print quality:

Rocker shaft end play
Worn print sleeve and/or key
Print escapement timing
Bind in rotate system
Interference between tilt pulley spring anchor and ribbon plate or take-up spool
Burred print shaft
Broken print cam follower
Drive belt tension

1 SKIRT CLEARANCE – LOSS OF (10/68)

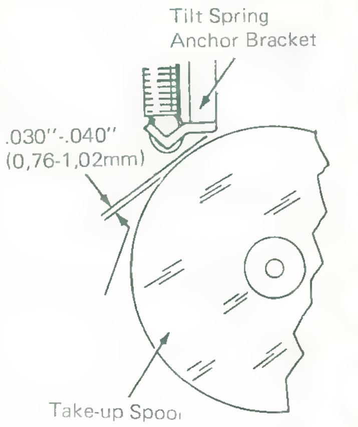
End play of the print sleeve should be checked before adjusting a "Selectric" Typewriter for proper skirt clearance. It has been found that some carrier bearings may have burrs on their sides which, when worn off, can allow excessive end play in the print sleeve. This excessive end play allows the detent cam to move to the right, and results in less skirt clearance.

2 LIGHT CHARACTERS – FABRIC AND FILM RIBBON (10/68)

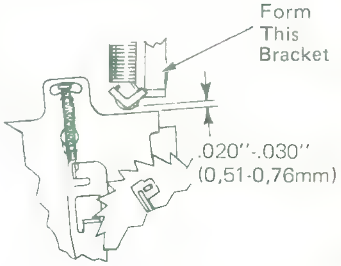
On some machines using the film ribbon mechanism, interference between the tilt spring anchor bracket and the ribbon take-up spool flange has been experienced. The symptoms of this interference may be:

1. Broken tilt or rotate tape.
2. Differences in print quality.
3. Damage to the ribbon take-up spool.

This problem may be corrected by forming the spring anchor bracket to the rear to clear the take-up spool.



Intermittent light characters on fabric ribbon machines may be caused by interference between the tilt pulley bellcrank spring anchor and the ribbon feed and reverse plate when the plate is positioned to feed the right-hand spool. This interference occurs just before print. Form the spring anchor to provide enough clearance.

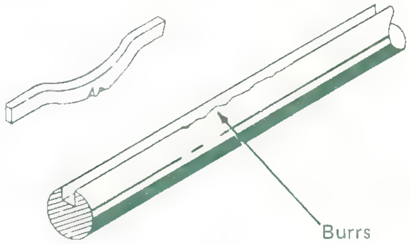


3 TILT 3 CHARACTERS TOO LOW (CEM 222) (10/73)

Some machines may have reached the field with yokes (02-520) being out of specification. The rotate detent nut (02-410) hits the yoke when a tilt 3 character is selected. If experiencing this problem, remove enough of the yoke at the point of contact to allow proper tilt detenting.
NOTE: The material is soft enough so that a file may be used.

4 PRINT AND ESCAPEMENT FAILURES (10/68)

Burrs on the print shaft can often be caused by a defective or worn key. This condition can cause escapement and/or print differences.



5 YOKE ADJUSTMENT (10/68)

When adjusting a "Selectric" Typewriter to satisfy a critical impression condition, rotational adjustment of the yoke may be necessary.

6 ROTATE ALIGNMENT CHANGES (CEM 195) (3/73)

When it is hard to make and/or maintain coarse rotate alignment, check:

1. Key for bottoming out in rotate pulley before tightening on lower ball socket (change key) (02-422).
2. Loose pin in lower ball socket (02-415).
3. Setscrew in rotate pulley hitting against lower ball socket shaft instead of key (change rotate pulley) (02-420).
4. Excessive head play caused by too much slot width of ball joint (02-414).
5. Wear in the lower ball socket in the yoke (02-520).

1 EXCESSIVE HEAD PLAY (CEM 223) (10/73)

If experiencing excessive head play, this may be caused by contaminated ball joints (02-414).

Replace the ball joint, lower ball socket, tilt ring and tilt ring pins bullets).

The IPE Model 224 backspace tool (P/N 9900369) can also be used to adjust the tilt detent setscrews by holding the nut with the backspace tool and inserting a no. 2, 6-fluted wrench through the B/S wrench into the setscrew.

Recovery Code
Expired 5-1-76

2 TILT RING SHIM CENTERING – 40 SECONDS (10/68)

1. Slightly loosen the screws which hold the tilt ring spacer.
2. Insert the 6-fluted, no. 6 bristol wrench (used for print shaft gear) into the notch and run it completely around the ball socket. It should pass without binding at any point.
3. With the wrench at the front, tighten the front screw; with the wrench at the rear, tighten the rear screw.

This technique does a better job of centering than the old way using the typing element.

3 TILT RING REMOVAL (10/68)

To make tilt ring removal easier, half-cycle the machine to a 2-tilt position. This will position the tilt ring almost level and allow the tilt detent to move up, making it easier to slide the rotate detent out.

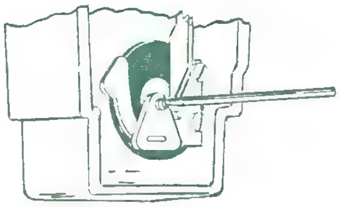
4 LOWER BALL SOCKET REMOVAL (10/68)

1. Half-cycle the letter "T."
2. Remove tilt ring.
3. Loosen rotate pulley setscrew.
4. Use handle of small springhook as a follower and remove lower ball socket.

To replace, reverse the procedure and center the tilt ring between the posts of the yoke.

An easy method of loosening the rotate pulley from the lower ball socket after loosening the setscrew (02-421) is to lightly hit a screwdriver placed on the lower end of the ball socket (02-415).

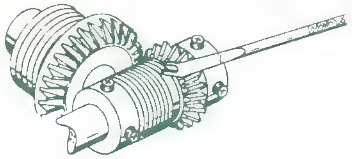
5 ROTATE PULLEY SETSCREWS STIRPPED – SERVICE TIP (10/68)



The lower ball socket can be removed if the rotate pulley setscrew is stripped in the pulley by removing the tilt ring assembly and by taking a fulcrum wire and lightly hitting the lower ball socket out through the top of the yoke. Remove the rotate spring and take the pulley out of the bottom of the carrier.

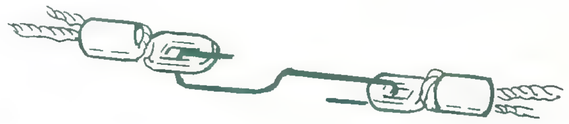
6 MOVING CARRIER WITH MACHINE HALF-CYCLED (10/68)

The carrier can be moved with the machine half-cycled without changing the half-cycle position. To do this, push the tip of the RH loop of the tab governor spring toward the rear after latching out the tab lever. This will allow the carrier to move to the right.



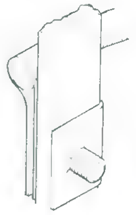
7 CARRIER REPLACEMENT – SERVICE TIP (CEM 311) (3/76)

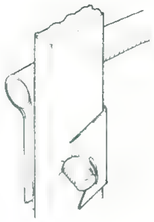
A paper clip can be used to hook the C/R and tab cords together when replacing the carrier on the "Selectric" Typewriter. This keeps the cords out of the way during carrier replacement and helps to reinstall them.



8 DUAL VELOCITY CLIP – INSTALLED WRONG (CEM 209) (6/73)

Some "Selectric" typewriters may have the dual velocity cable clip (02-214) incorrectly mounted on the carrier. The screw may be at an angle and not in the threaded part of the clip. If experiencing problems with dual velocity, check this screw. The screw should be removed and properly reinstalled.



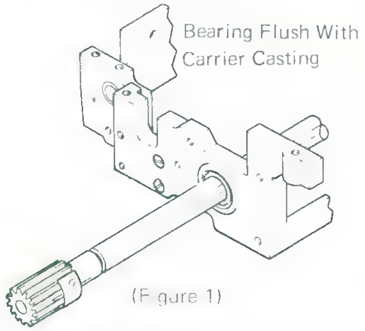


9 CORRECIING TAPE LIFT – LOST MOTION (CEM 315) (4/76)

If all adjustments are correct, but still unable to get enough tape lift motion for proper correction or lift guides stick in lift position, check the left-hand carrier bearing.

Remove left-hand wiper retainer (02-48) and wiper (02-50); check left-hand carrier bearing. Bearing should be flush with the carrier casting. If bearing extends out of the casting, it is possible for the lift cam follower to slip off the lift cam. Use the following procedure to correct this condition.

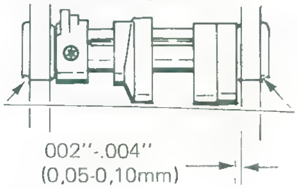
1. Move carrier to the far right position.
2. Remove print shaft gear (02-40) and retainer (02-51). Slide the print shaft to the right until it clears the left side of power frame; then remove wiper (02-50) and retainer (02-48); turn pivot shaft gear around (Fig. 1); install on print shaft and tighten both screws (02-41).
3. Loosen ribbon lift cam screw (26-112) and print cam screw (02-203).
4. Use print shaft gear to drive bearing into carrier casting by sliding the print shaft to the right. Repeat this until the bearing is driven flush with left side of the carrier casting.
   CAUTION: Do not apply too much force as this may drive the bearing in too far (Fig. 1).



(Figure 1)

This procedure will work only if the bearing was not fully inserted in the carrier casting. If the bearing is loose (oversized casting hole), the bearing will not stay in position if reinserted and carrier replacement is recommended. This procedure does not apply to the early level (smooth outer diameter) carrier bearings.

5. Adjust the ribbon lift cam and print cam (Fig. 2).
   NOTE: Check detent cam adjustment.



(Figure 2)

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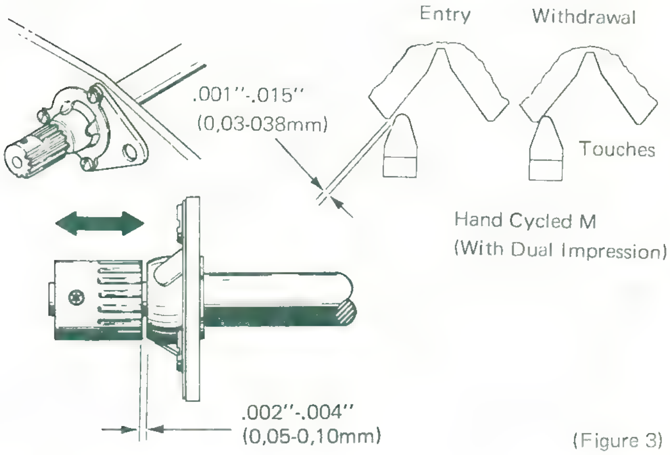
6. Replace all parts and adjust print shaft end play and fine timing (Fig. 3).



(Figure 3)

1 TYPE ELEMENT – ALIGNMENT CHECK (10/68)

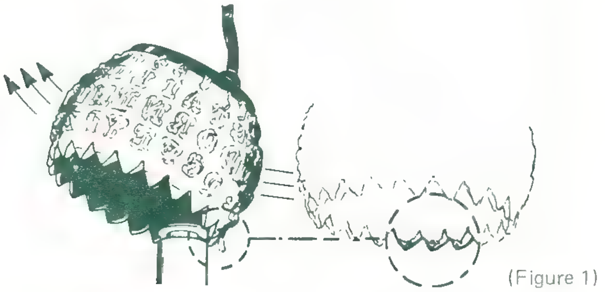
Type the word CHROMEX in both upper and lowercase to make sure that all slides (character sections) in any U.S. correspondence typing element are correctly positioned. This information should be of value at the time of installing a new typing element or in diagnosing a malselection.

2 TYPE ELEMENT BREAKAGE – BALL SOCKET AREA (10/68)

Care should be taken not to increase the print cam drive beyond .260" (6,6mm). Impression increased above .260" (6,6mm) can cause breakage of the type element in the area that fits over the upper ball socket.

3 TYPE ELEMENT BREAKAGE – TEETH (CEM 329) (12/76)

Broken teeth in the area of the lever pivot can be caused by not fully detenting the lever before the element is lifted off the tilt ring. As the type element is lifted, the lever spring rotates the element (Fig. 1) and the teeth strike the upper ball socket. This could break a tooth in the area of the hyphen (-) or the uppercase "G."



(Figure 1)

All operators should be instructed to detent the lever in the open position before lifting the element.

4 UNDERPRINTING – BOOKFACE ACADEMIC AND PRESTIGE PICA (CEM 192) (1/73)

A dot appears on the typed page below the capital and lowercase "t" and cannot be adjusted out. This is caused by the fractions being too large.

Replace type element with new one. The fractions on elements manufactured after October 2, 1972 are smaller. This applies only to the listed typestyles. Part numbers remain the same.

(Continued)

Type Elements

1167158	Bookface Academic – 101
1167123	Prestige Pica – 101
1167182	Prestige Pica Legal Fraction

Recovery Code
Expired 1-31-74

5 TYPE ELEMENT DAMAGE – MALADJUSTMENT (10/68)

On "Selectric" typewriters equipped with the new fabric ribbon mechanism, it is important to guard against EXCESSIVE increase of type element motion.

As the total distance (head-to-platen) gets near .300" (7,62mm), the type element rests closer to the ribbon feed plate. During character selection, the top of the ribbon feed lever (13073) can come in contact with the type element teeth or with character faces in the tilt 3 band. This can cause damaged type face or broken teeth.

The above condition should be kept in mind when a particular application (e.g., stencils) requires increased velocity. Do not maladjust.

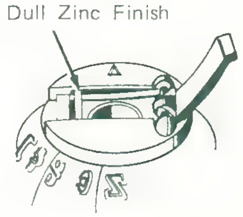
6 TYPE ELEMENT DAMAGE – PLATING (10/68)

Type Element – Plating Damage (02-180): Excessive heat can cause "bubbling and blistering" of type element plating. Storage areas for "Selectric" Typewriter elements must be selected with care. Elements which are heated above 140° F. (60° C.)may be damaged. Areas of exposure:

1. Automobile trunks and the area near the windshield or rear window during the summer.
2. Near a heating outlet or steam radiator.
3. In the CE service case near the power cleaner.
4. Machines used in an enclosure.

7 LATCH SPRING BREAKAGE – TYPE ELEMENT (CEM 76) (11/70)

Latch springs may break on some type elements manufactured between June 20 and September 29, 1970.



Type elements with a dull zinc finish latch spring may have this problem. Type element springs with a bright nickel finish are not subject to breakage.

Some problems which can be caused by a broken latch spring are:

1. Element cannot be removed by the operator.
2. Print quality (alignment or impression) may be affected.
3. Uneven underscore.

Recovery Code
Expired 11-4-71

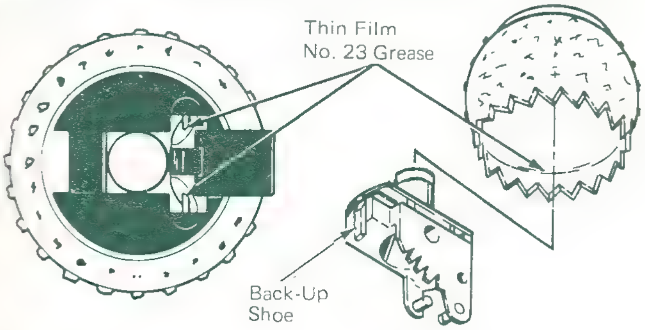
1 TYPE ELEMENT LUBRICATION (CEM 156) (4/72)

Every element should be lubricated with a light film of no. 23 grease in two areas.

1. Lever pivots.
2. Inner surface that is contacted by the tilt ring back-up shoe — only on "Selectric" Typewriter and I/O.

If an element lever should bind shut, a drop of oil at each of the lever pivot points will remove the bind.

Since some customers clean their elements in a way that removes all lubrication, check each typehead on inspections. Operators should be instructed NOT to wash their elements as this removes the lubrication.



2 TILT RING PIVOT SCREWS - HEX HEAD (CEM 317) (4-76)

The tilt ring pivot (bullet) screws are now hex head screws to make removals easier. The top of the yoke, where the screw mounts, has been removed to compensate for the additional thickness of the screw head (Figure 1). The new style can be identified by a flat surface on the top of the yoke instead of a rounded surface. This hex head screw cannot be installed on old level yokes. If necessary, the old bristol screw (P/N 1123828) may be used on new level.

The P/N for the yoke will remain the same.

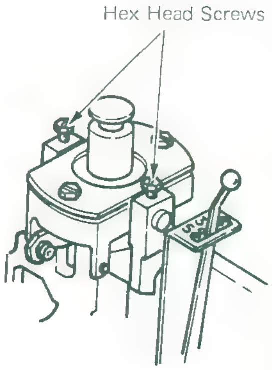


Figure 1

Caution: Do not overtighten.

3 PRINT QUALITY — PLATEN HEIGHT ADJUSTMENT (CEM 34) (2/79)

Print quality problems, such as tails on the characters and poor edge definition. The platen cannot be adjusted low enough to get even top and bottom print. Check the platen height adjustment with the platen gauge (APM frame 214).

With the platen gauge installed and the platen adjusted for .030" (0.76 mm) clearance between the top of the platen and platen gauge, the platen should need only slight adjustment to get even top and bottom print. If the platen height eccentrics require excessive adjustment downward for even top and bottom print, the yoke (02-520) could be the problem. The tilt detent slot may be off location.

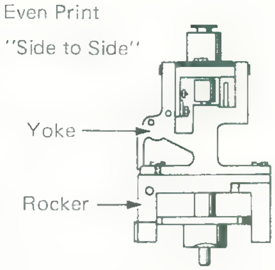
(Continued)

Since this condition cannot be seen, it is recommended the yoke be changed before attempting further print related adjustments.

Refer to tilt ring and rotate shaft removal procedure in service manual (F/N 241-5615) for service hints.

After replacing yoke, check all print adjustments with emphasis on homing and skirt clearance after adjusting the position of the yoke.

1. Position the yoke rotationally under its mounting screws so the density of the left and right sides of a uniform.



(Front View)

CARRIER RETURN

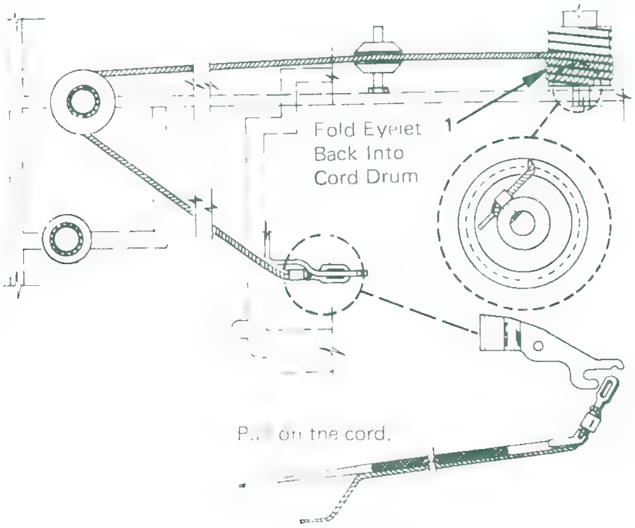
1 CORD WEAR – CARRIER RETURN (10/68)

Some carrier return cord wear may be caused by the rotate tape contacting the cord between the left-hand front and rear cord pulleys. If this condition is found, place washer, P/N 1090790, under the left-hand front cord pulley (03-336) to allow enough clearance between the cord and the rotate tape.

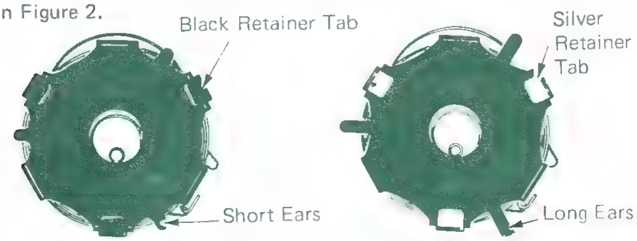
2 CORD REPLACEMENT PROCEDURE (10/68) (CEM 95) (2/71)

The following cord replacement technique has some advantages over methods in previous publications. The procedure described below uses most of the advantages of all previous procedures.

1. Remove both cords and hand cycle the machine until the mainspring tension is removed.
2. Disconnect the carrier return unlatching link.



3. Manually latch the carrier return mechanism and rotate the turning wheel (while counting the revolutions of the escapement shaft) until the mainspring is wound the proper number of turns as shown in Figure 2.



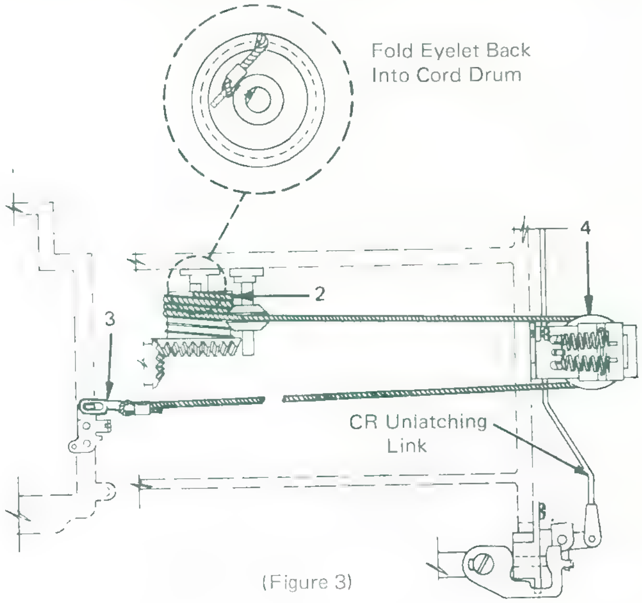
This Spring Should Be Wound 7 Turns

(Figure 2)

This Spring Should Be Wound 5 Turns

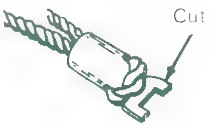
4. With the carrier to the right, feed the carrier return cord around the large pulley and connect it to the cord drum (Fig. 1, No. 1) and carrier.

   Connect the carrier return cord using scissors clamps or the pusher end of a springhook as shown in Fig. 1.
5. Hold the slack out of the carrier return cord and rotate the turning wheel until the carrier gets near the left sideframe. Stop hand cycling when the notch in the escapement cord drum is visible.
6. Connect the escapement cord to the drum and wrap approximately one turn *(two turns for 7X3) of the cord around the drum (Fig. 3, No. 2).
7. Thread the cord around the cord tension pulley (Fig. 3, No. 4) and connect it to the carrier (Fig. 3, No. 3).



(Figure 3)

8. Pull the carrier return cord over the left-hand front pulley and connect the unlatching link.
9. By using cord anchor (P/N 1175578) a longer cord can be cut to the proper length.
10. When using the premeasured cords (white), one anchor lug can be cut for easy installation in the cord drum slot. After cutting the cord lug, check for burrs on the lug. If necessary, remove the sharp edges with a file.

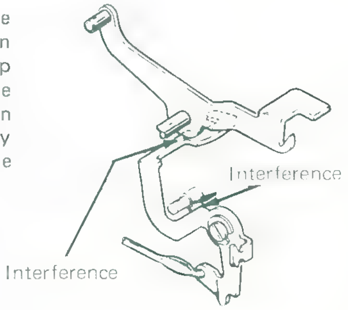


3 EXCESSIVE SHOE CLEARANCE (CEM 241) (1/74)

When carrier return failures are caused by excessive shoe clearance, check that the clip (03-507) is fully bottomed on the actuating arm (03-508) before readjusting.

4 PARTIAL CARRIER RETURN – TORQUE BAR CLIP (10/68)

Partial carrier return can be caused by the rotational position of the escapement torque bar clip (06-33), allowing it to interfere with the carrier return keeper. In some cases the latch keeper may bind off on the bottom of the detent arm (20-460).



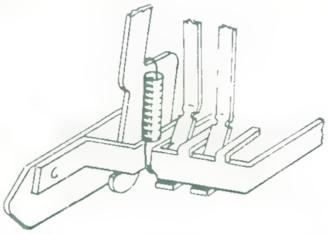
5 LATCH OVERTHROW (CEM 60) (7/70)

To ensure proper overthrow, install platen in machine when checking or making the carrier return latch overthrow adjustment.

1 PARTIAL CARRIER RETURN (10/68) (CEM 311) (3/76)

Complete carrier return failures and some partial return failures can sometimes be traced to operation of spacebar and return at the same time (e.g., at the end of a typed line).

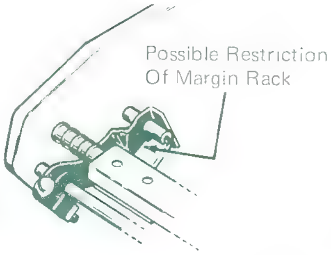
The condition occurs because the spacebar cam follower operates the interposer restoring bail before the C/R operational latch can be positioned under the index cam follower.



This condition can be adjusted by cutting spring (P/N 0190341) to 3/4" (19,05mm) length. Next, form each end as shown and install it between the C/R operational latch and the rear bottom edge of the spacebar cam follower.

The spring should loosely span the distance between parts at rest, and should not interfere with vertical line spacing.

2 UNLATCHING FAILURES (10/68)



Failure to unlatch the carrier return can sometimes be caused by the RH margin release lever (09-67) and the LH margin release lever (09-64) not being adjusted properly. It is possible to block the margin rack movement to the left. If the 7X1 keylever is bent, it could also give the same problem.

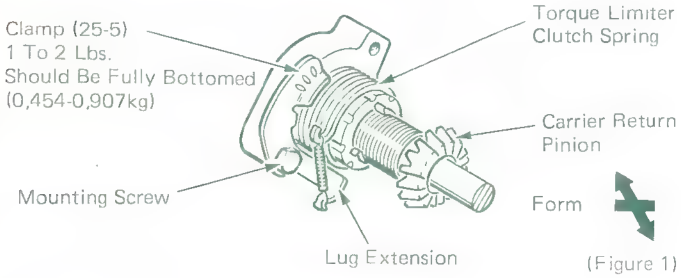
3 SLOW OR UNEVEN RETURN (1/74)

If experiencing slow or uneven carrier return on earlier level "Selectric" typewriters with the cast carrier return lever (03-41), ensure that the setscrew (03-409) is tight. The setscrew can loosen slowly causing hard-to-diagnose problems.

4 SLOW OR UNEVEN RETURN (CEM 308) (1/76)

When experiencing slow or uneven C/R and normal adjustments (2 to 3 loop C/R shoe overlap and .015"-.020" [0,38-0,51mm] shoe clearance), do not correct the condition; replace pinion gear (25-14). Some gears may not have the proper surface finish. Correct gears can be identified by a dull, dusty gray appearance over their whole surface. If slow or uneven condition exists after changing the pinion gear, the C/R actuating arm should be replaced with new level arm (CEM 316).

The torque limiter adjustment should be adjusted to the high side of the 1 to 2 lb. (0,454-0,907kg) specification. Check the clamp (25-5) to ensure its mounting screw (25-8) is right and the clamp is fully bottomed on the clutch spring (25-9) (Fig. 1).



(Figure 1)

CAUTION: The spring lug extension may hit the carrier return shoe arm or the print interlock link when in full overthrow position. Form the tip of the spring lug down over the loop of the spring.

**Recovery Code
Expired 10-30-76**

5 PAWL CLEARANCE – LOSS OF (CEM 88) (1/71)

If experiencing a problem maintaining carrier return pawl clearance, check the escapement pawl mounting stud for wear at the point that contacts the escapement torque bar.

6 PAWL CLEARANCE – ADJUSTMENT TIP (10/68)

With the machine turned off, slowly depress the carrier return latch by hand. Pawls should be removed from their racks as the bottom of the latch is even with the latch keeper surface. This provides correct pawl clearance (.005"-.015") (0,13-0,38mm).

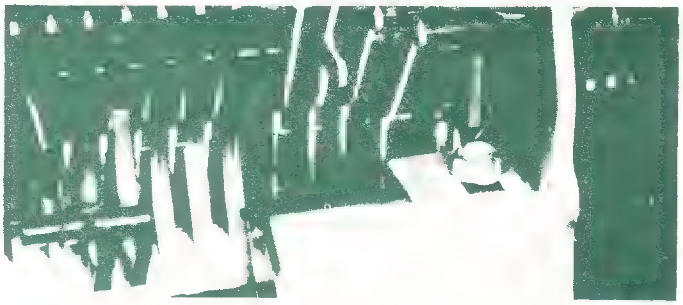
7 SCRAPING NOISE ON RETURN – ESCAPEMENT TORQUE BAR (10/68)

There are some cases where the lugs of the escapement and backspace pawls have burrs on them allowing the pawls to scratch into the escapement torque bar, moving it to the left and/or causing noise during carrier return. The pawls should be replaced or the lugs polished to stop the noise condition. A Model C feed roll clip on the left end of the torque bar inside the frame works well to prevent movement.

There are cases where the escapement torque bar is not parallel to the print shaft. This can be checked by observing the .001"-.002" (0,03-0,05mm) clearance between the escapement torque bar and pawl mounting stud on the left, then the right side of the machine. The dowel pin can be removed from the mounting plate (06-54) to move the plate front-to-rear for proper adjustment.

8 KEYLEVER PAWL OVERLAPPING CARRIER RETURN – INDEX (10/68)

On some early machines the carrier return keylever pawl may become overlapped with the index keylever pawl, thus making the carrier return inoperative. To prevent this, a shim (P/N 1077799, Parts Packet No. 8) may be used to limit the downward travel of the carrier return keylever. Place the shim under the RH keylever guide comb screw and adjust so the C/R keylever just moves far enough to repeat.



1 CARRIER RETURN/EXPRESS BACKSPACE/SHOE ARM – REDESIGNED (CEM 316) (6/77)

The carrier return shoe arm has been redesigned to include a one piece arm using the same shoe for carrier return and express backspace. The new arm is plant installed on "Selectric" and "Selectric" IIs. The arm is field installable on all "Selectric" IIs by removing the express backspace arm and installing the new arm. On "Selectric," the operational cam check pawl pivot shaft must be replaced with a "Selectric" II shaft (25-220). The express backspace bellcrank lug is not used on SE. Ensure lug does not interfere with operational keylevers on interposers.

1. Remove old style shoe bracket (03-500).
2. (SE) Replace check pawl pivot shaft (25-220) with SE II shaft.
3. Install new arm and install C-clip (24-106). Connect arm extension in actuating arm spring (03-505) (Fig. 1).
4. Install express backspace restoring spring to carrier return arm (Fig. 1).

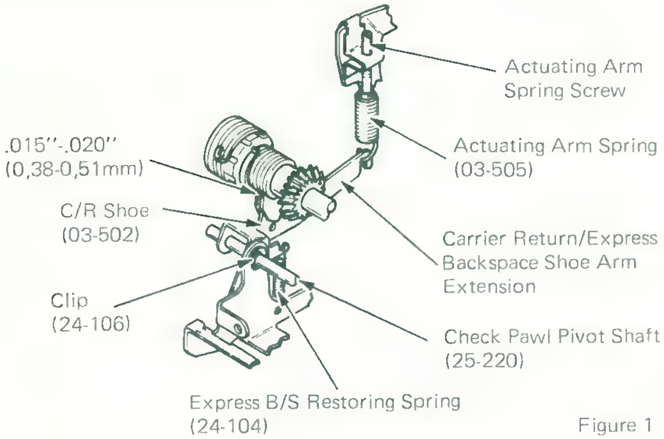

Actuating Arm Spring Screw
.015"-.020" (0,38-0,51mm)
Actuating Arm Spring (03-505)
C/R Shoe (03-502)
Carrier Return/Express Backspace Shoe Arm Extension
Clip (24-106)
Check Pawl Pivot Shaft (25-220)
Express B/S Restoring Spring (24-104)

Figure 1

5. Install restoring spring (03-583) and clip as shown on NRB/S machines only (Fig. 2).

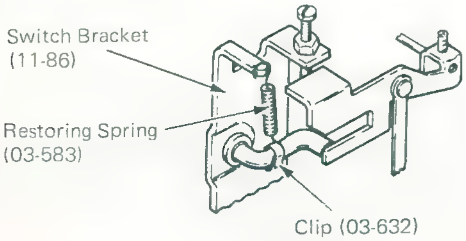


Figure 2

1. Form the arm as shown so the shoe overlaps three coils of the C/R clutch spring. (Fig. 3)
2. Check for interference between arm extension and interrupter link (03-625). Form extension if necessary.

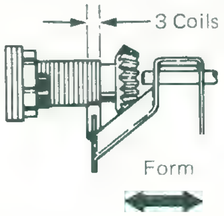


Figure 3

3. Adjust the actuating arm spring screw for .015"-.020" (0,38-0,51 mm) clearance between the C/R shoe and the C/R clutch with all parts at rest (Fig. 1).
4. (SE II) Form the express B/S bellcrank lug so the shoe engages the carrier return clutch spring when the keylever is .035"-.050" (0,89-1,27mm) from the bottom of the guide comb slot (Fig. 4).

(Continued)

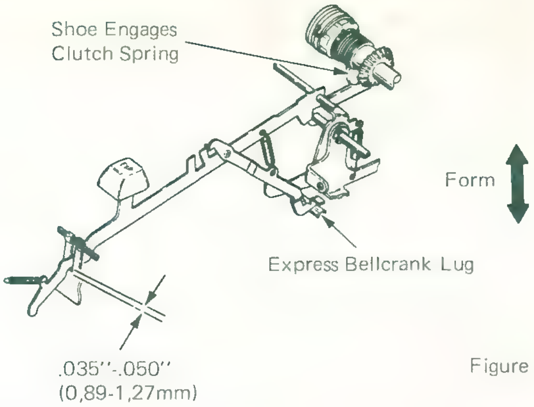


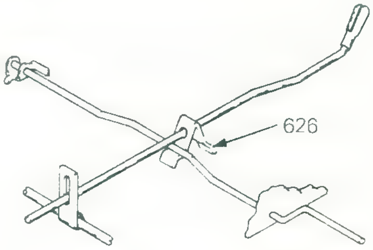
Figure 4

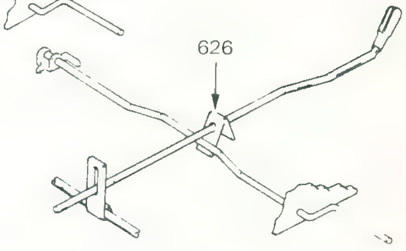
2 CARRIER RETURN INTERLOCK – REDESIGNED (CEM 364) (5/78)

The C/R interlock clip (03-626) has been redesigned to eliminate possibility of rotating on the interlock link.

SYMPTOM: Keyboard locks while typing due to the clip rotating on the interlock link.

Install redesigned part. The part number and adjustments remain the same.





3 DUAL TRANSPORT CONVERSION (CEM 368) (11/78)

Conversion from the steel cable transport system to the dual transport system is now possible without removing the backplate assembly. The following procedure and parts listed, will reduce conversion time.

1. Remove – Covers, platen, deflector and R.H. dust shield.
2. Remove – Switch from switch bracket.
3. Remove – C/R cable and table cable.
4. Remove – Mainspring
5. Remove – C/R shoe bracket (03-500)

(Continued On Next Page)

Remove — Escapement shaft. This can be done without removing the backplate. Break off the cable tension arm (24-4) (Fig. 1). Hold the tension arm with a screw driver and turn the escapement shaft with gas pliers). This may damage the escapement shaft hub, which will be replaced with the new level.

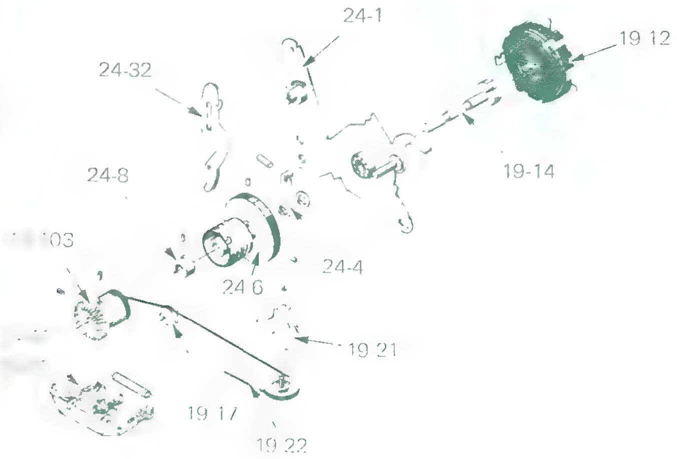


Figure 1

This process breaks out the D slot in the tension arm and will allow removal of the escapement shaft from the rear of the machine after set screws are loosened in the tab drum (18-103) and collar (24-8).

Remove: The B/S driver (24-32).

Remove: The C/R, B/S drum (24-6) through the hole in the bottom of the power frame.

Remove: The cord anchor bracket (26-55) (24-41).

Remove: The Transport pulley bracket (19-21).

Remove: The tab cord pulley (19-17).

Installation of the dual transport parts can be done by reversing the removal procedure (Fig. 2). Use the APM for the adjustment of these components. Also be sure to install the driver mounting stud (24-28) with the head against the backplate. Installation of the C/R steel cable and the tab cord is reviewed below:

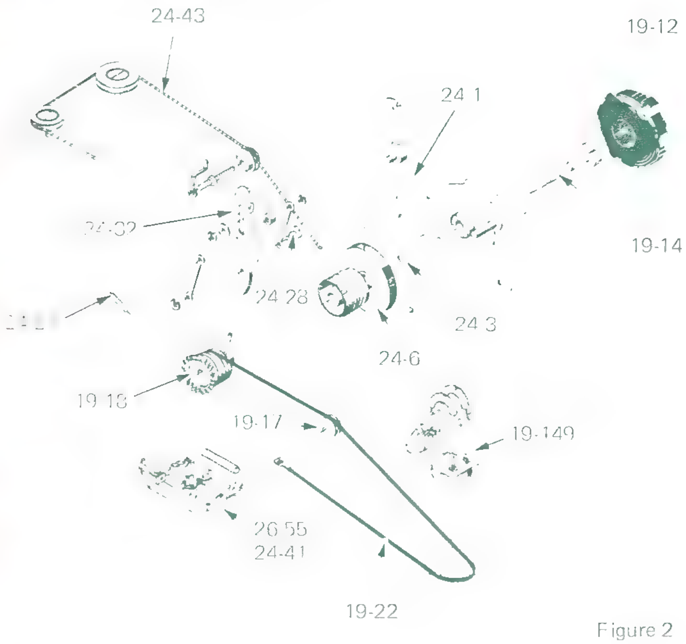


Figure 2

Dual Transport System Installation:

Before installing the tab and C/R cord and cable, all other parts should be installed and adjusted properly.

Continued)

1. Disconnect the carrier return unlatching link.
2. Manually latch the C/R and turn the turning wheel while counting the number of rotations of the escapement shaft, until the mainspring is wound the proper number of turns (Fig. 3).

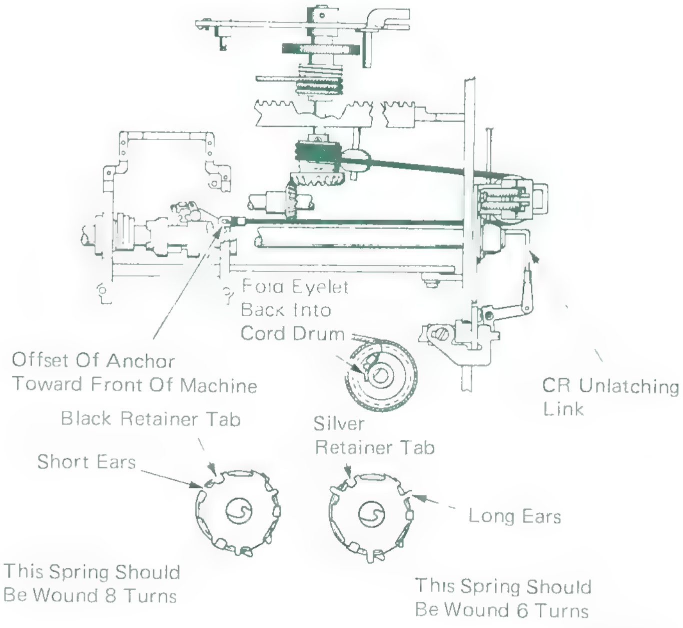


Figure 3

3. With the carrier all the way to the left, connect the tab cord to the carrier and position the cord through the right power frame and around the transport pulley then connect it to the front drum (Fig. 3). It is not necessary to wind the cord around the drum. With the cord attached to both ends, unlatch the C/R and guide the cord onto the drum while rotating turning wheel. (This will wind the rest of the cord onto the drum) then place the cord on the cord pulley (19-17) (Fig. 1).
4. Turn machine on and space or tab the carrier over the operational shaft area for easier installation of the C/R cable. Turn the machine off and be careful not to B/S or C/R, because it will unwind the tab card. Next, loosen the set screws in the B/S drum. With the machine off, cycle a B/S until the driver engages the ratchet. This will help in the installation of the C/R cable.
5. Attach the cable to the anchor bracket (use the fork end of a spring hook), run the cable around the pulleys and tilt machine up. Hook the cable onto the B/S drum and hold in position while rotating ratchet to wind the excess cable onto the drum. This can be done by releasing the driver from the drum while holding and rotating the drum with the same hand, at the same time hold tension on the cable with a spring hook from the left end of the machine. Do not position the cable around the front pulley and take up all excess cable and then tighten the B/S drum. Hook the cable over the front pulley and check for proper adjustment of the transport pulley (Frame 117).
6. Connect C/R unlatching link.
7. Perform a functional check.

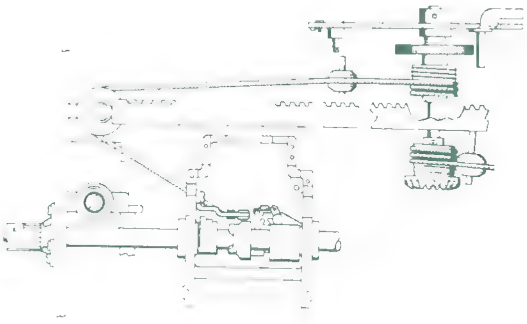


Figure 4

CORRECTING

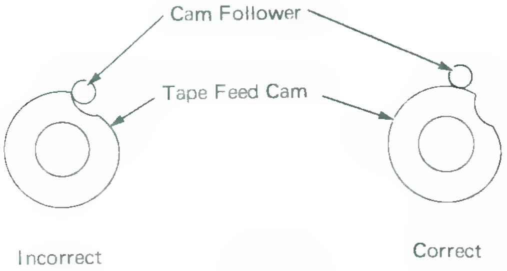
1 CORRECTING MECHANISM OPERATION FAILURE (CEM 210) (7/73)

If the correction mechanism fails to operate when the correcting key is depressed, check "tape feed cam follower front lug" adjustment. Make this adjustment with the machine at rest and the print shaft rotated top-to-rear as far as possible. If this adjustment is not correct, it may cause a bind between the feed cam follower (26-45) and the feed cam inhibitor (26-53) which will prevent the feed mechanism from activating.

2 CARRIER BINDS TAB OR SPACEBAR (CEM 210) (7/73)

Carrier binds during tab or spacebar operations may be caused by tape feed cam follower positioned just off the high dwell of the feed cam (Fig. 1). Cam follower position should be observed with the machine at rest and the print shaft rotated top-to-rear as far as possible. Binds are caused by rotational pressure on the right end of the print sleeve key against the keyway. Fine adjust rotate homing and timing. If this does not correct this condition, replace the tape feed cam (26-50).

NOTE: Gear train backlash and cycle clutch overthrow must be correct.



(Left Side View) (Figure 1)

3 TAPE FEED CAM REDESIGNED (CEM 247) (3/74)

The correcting tape feed cam has been redesigned to provide a longer dwell on high point of cam (26-50) to prevent follower roller (26-45) from falling into notch of cam.

Symptom: Carrier binds during tab or spacebar.

If normal adjustments will not correct, replace old level cam (26-50) with new level.

Above S/N 8X5 2322160 and 8X3 1241822.

Recovery Code
Expired 3-15-75

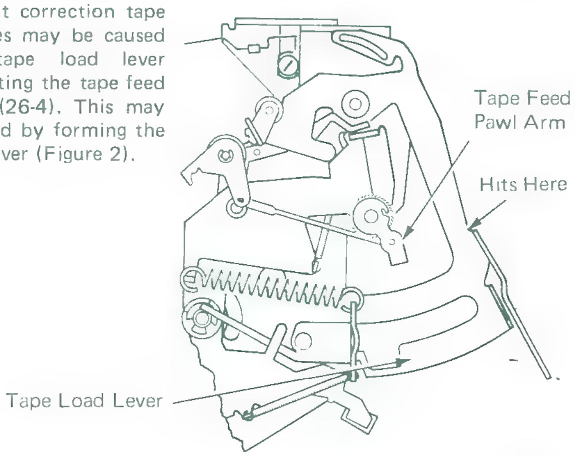
4 CORRECTION TAPE – CONTINUOUS FEED (CEM 237) (1/74)

Some machines may have reached the field with a soft stud that mounts the roller on the tape feed follower (26-45). This will cause loss of motion and will not allow the follower to latch up. This will result in continuous tape feed. If this occurs and normal adjustments will not correct it, the follower bracket (26-45) should be replaced.

Recovery Code
Expired 2-1-75

5 CORRECTION TAPE – INTERMITTENT FEED FAILURES (CEM 210) (7/73)

Intermittent correction tape feed failures may be caused by the tape load lever (26-15) hitting the tape feed pawl arm (26-4). This may be corrected by forming the tape load lever (Figure 2).



(Figure 2)

6 INCOMPLETE CORRECTION (CEM 210) (7/73)

Traces of the incorrect character remaining following a correction operation may be caused by the tape feed cam inhibitor (26-53) not functioning. The cam follower should not be on the tape feed cam when the element is moving toward the platen.

7 TAPE FEED FAILURES – LIFT-OFF TAPE (CEM 242) (1/74)

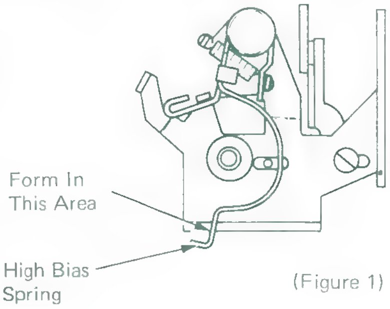
If experiencing lift-off tape feed failures, check the base of the take-up spool for a binding condition with the swing arm (26-30). If a bind exists, the spiked wheel (26-006) will be cammed off the tape.

Solution: Replace the lift-off tape.

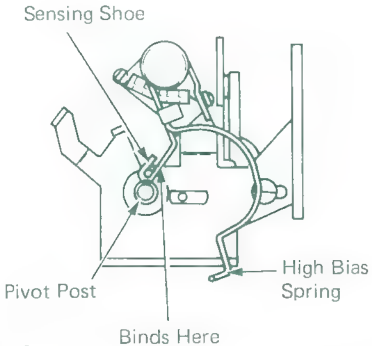
8 CRADLE ASSEMBLY BINDS (CEM 197) (3/73)

Spooling off of the IBM Tech III coverup tape and/or interference between the ribbon and either of the correcting tapes may cause damage to the ribbon. This can cause voids due to the ribbon folding or due to the correcting tapes removing ink from the ribbon.

1. The high bias spring may be preventing the tape supply ratchet from returning to rest. This condition is corrected by forming the high bias spring to slightly open the angle at the tip (Figure 1).
2. When the high bias spring is manually rotated too far counterclockwise, the sensing shoe may bind on the base of the supply ratchet pivot post (Figure 2). This leaves the high bias spring disengaged from the supply ratchet. To correct, replace the tape supply cradle assembly (26-34).



(Figure 1)



(Figure 2)

Recovery Code
Expired 3-7-73

1 CORRECTING RIBBON — FOLDING (CEM 226) (10/73)

Folding And Winding Around Spike Driver: A folding condition occurs as the ribbon enters the take-up side of the cartridge when a ribbon is installed or reinstalled. Once the ribbon has started to fold, it will not take up properly.

To minimize this condition:

1. The cartridge should be inspected before installing to ensure that the ribbon leader is centered on the ribbon and the supply core. If not, it will cause binds in the cartridge.
2. Ensure that the shock arm wire (15-83) does not contact the supply spool teeth when the ribbon is in the load position.
3. Adjust the left cartridge retainer clip as far left as possible (Figure 1).
4. Form the front cartridge support lug for a clearance of .010"-.015" (0,25-0,38mm) clearance between the cartridge and lug (Figure 1).

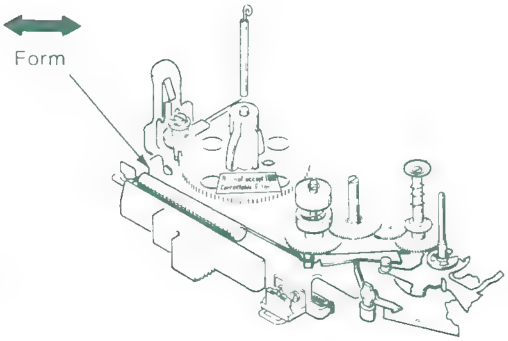


Figure 1

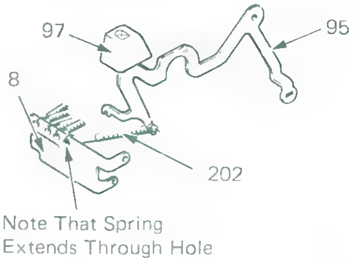
5. Ensure that the take-up core interlock prevents the cartridge from being turned in the wrong direction when in the load position.

Operators should be instructed to wind the ribbon in the proper direction and only until the leader is even with the right edge of the cardholder. When reinstalling a ribbon, it should only be wound until the slack is taken out. If more movement is necessary, it should be done by typing.

2 CORRECTING KEYLEVER AND BUTTON — REDESIGNED (CEM 261) (9/74)

Correcting keylever (26-95) and button (26-97) have been redesigned to prevent unintentional activation of the correcting mechanism.

The button has been lowered in height and a spring added to the keylever increases the force required to initiate a correcting cycle. Spring (26-202) anchors to a hole added to front keylever guard (08-8). Install spring so that it will not interfere with the keybutton when depressed.



Spring (26-202) may be shortened to increase the pressure if unintentional actuation persists.

Present installed above approx. 8X3-1315900, 8X5-2446400.

Recovery Code
Expired (7-75)

3 LIFT-OFF TAPES — LIFT-OFF AND FEED FAILURES (CEM 285) (4/75)

Some lift-off tapes have a coating on the adhesive surface that produces a partial or gray imaged lift-off. These tapes should be replaced.

Some lift-off tapes may not feed the first portion of the tape due to the spiked driver not engaging the take-up spool. This can be corrected by winding the spool two to three extra revolutions.

When experiencing problems that cannot be corrected by adjustments and supplies or the application is suspect, submit a Supply Inquiry Request (Form No. 140-0108) with applications samples, supplies and other related materials as required.

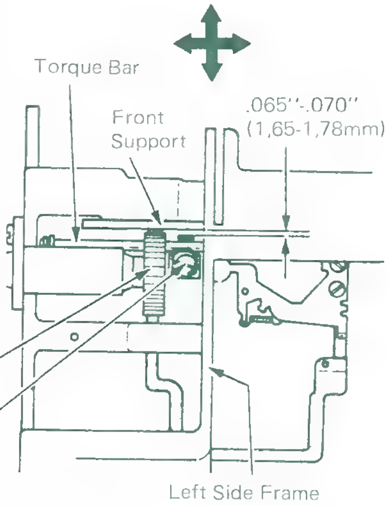
CORRECTING MECHANISM — REDESIGNED (CEM 310) (2/79)

A new correcting mechanism has been designed to improve serviceability. This change includes a "floating torque bar." All adjustments and parts used with this design will be identified by the abbreviation "FTB." The old style carrier is no longer used. When changing to FTB, order the front carrier support asm. (26-130) and mode link (26-086). Also remove bracket (26-089) before installing FTB parts and add spring (26-052).

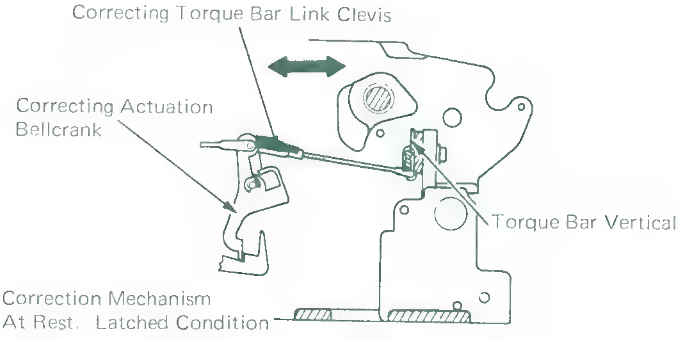
The new adjustments are as follows:

1. FTB Back-Up Adjusting Clip (26-132) — Move the carrier to the left until the adjusting clip is positioned between the intermediate drive gear and the LH side frame. Adjust the clip front-to-rear for .065"-.070" (1,65-1,78 mm) clearance between the back-up lug and the front support.

   Check to ensure the clip has not rotated clockwise when tightening causing a bind between the lugs on the guide and the torque bar.



2. Torque Bar Link (Preliminary) (26086) — Manually hold the torque bar vertical and adjust the torque bar link clevis to just span the distance to the correction bellcrank. The pin in the clevis must be in the front most position of the elongated slot in the bellcrank, reconnect link. THE TORQUE BAR SHOULD NOW BE VERTICAL.


Correcting Torque Bar Link Clevis
Correcting Actuation Bellcrank
Torque Bar Vertical
Correction Mechanism At Rest. Latched Condition

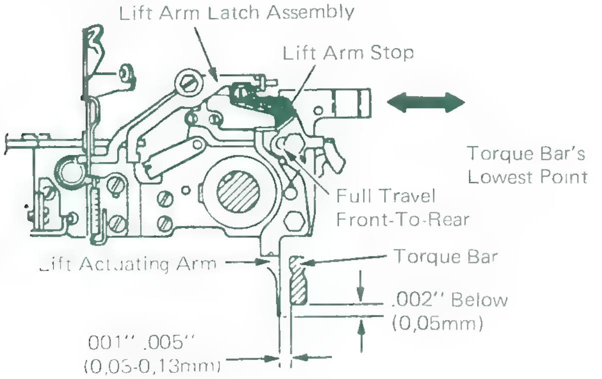
(Continued On Next Page)

3. a. Lift Arm Stop (26-125) – Adjust the lift arm stop for .001"-.005" (0.03-0.13mm) clearance between the working surface of the lift actuation arm and the torque bar.

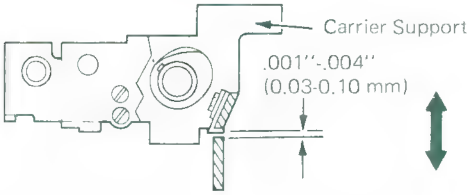
   The tip of the lift actuating arm must be a minimum of .002" (0.05 mm) below the bottom of the torque bar, at the torque bar's lowest point (center of writing line).

   b. Raise the front carrier support for .001"-.004" (0.03-0.10 mm) clearance with no carrier binds. If adjustment of support does not get clearance below the torque bar, form the actuating arm down. Check to ensure the lift actuating arm is free of binds if forming was required. Check for possible interference with gear train idler gear.

a.



b.



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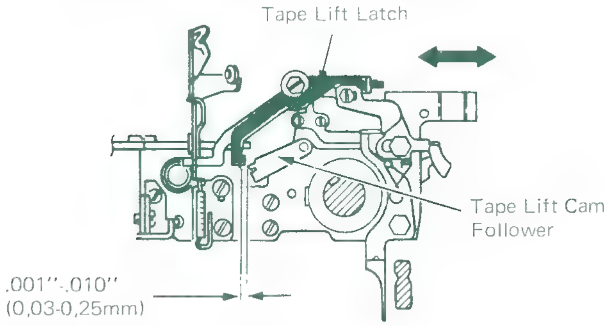
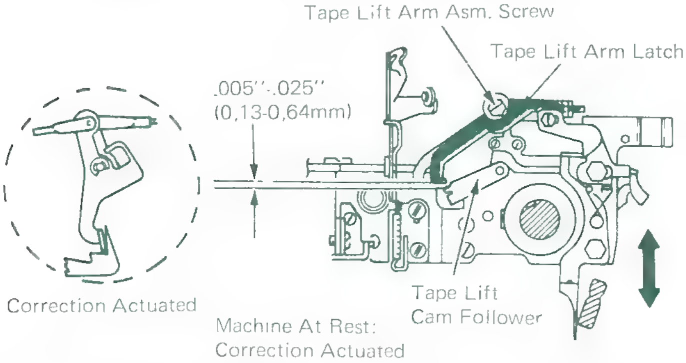
4. a. Tape Lift Latch Front-To-Rear (26-66) – With the machine at rest, adjust the lift latch front-to-rear for .001"-.010" (0.03-0.25 mm) clearance between the rear of the tape lift cam follower and the front lug on the tape lift latch.



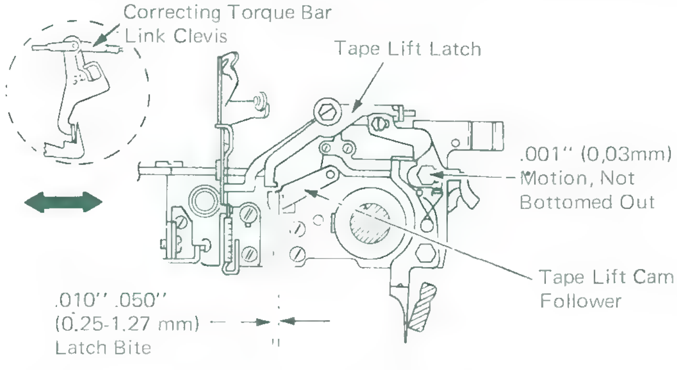
Machine At Rest Correction. Latched

   b. Tape Lift Latch Height (26-66) – With the machine at rest and the correction mechanism actuated, adjust the tape lift arm latch vertically for a .005"-.025" (0.13-0.64 mm) clearance between the bottom of the latch and the lift cam follower.



(Continued)

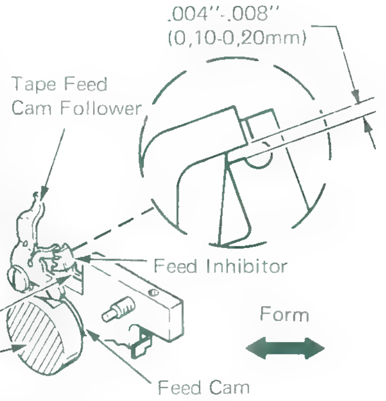
5. Torque Bar Link Adjustment (Final) (26-86) – With the machine at at rest and the correction mechanism actuated, adjust the link for a minimum bite of .010"-.050" (0.25-1.27 mm) bite. Also, the actuation arm must not be bottomed against the arms' mounting stud. If there is no forward travel of the arm asm., readjust the link for a minimum of .001" (0.03 mm) motion. This is to make sure the system is not choking off.


Correcting Torque Bar Link Clevis
Tape Lift Latch
.001" (0,03mm) Motion, Not Bottomed Out
Tape Lift Cam Follower
.010" .050" (0.25-1.27 mm) Latch Bite

Machine At Rest· Correction Actuated

---

6. Tape Feed Inhibitor Height (26-53) – With the tape feed cam follower on the high point of the cam (machine at rest) and the correction mechanism latched, form the feed inhibitor left to right for a clearance of .004"-.008" (0.10-0.20 mm) between the latching surface of the inhibitor and the bottom lug on the tape feed cam follower.



Machine At Rest, Correction Mechanism Latched

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7. Tape Feed Inhibitor Front-To-Rear (26-53) – With the machine at rest, form the tape feed inhibitor lug for a .001"-.015" (0.03-0.38 mm) clearance between the vertical surface of the inhibitor and the front surface on the tape feed cam.

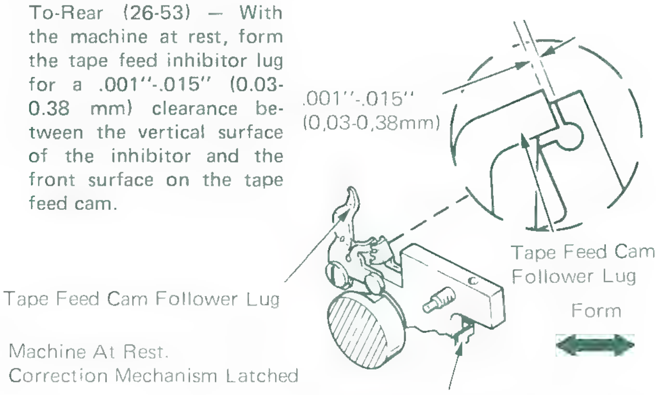

.001"-.015" (0,03-0,38mm)
Tape Feed Cam Follower Lug
Tape Feed Cam Follower Lug
Form
Machine At Rest. Correction Mechanism Latched
Tape Feed Inhibitor Lug

Figure 2

The inhibitor actuating bellcrank is preset at the plant and should not have to be adjusted in the field to meet any of the required adjustments. The ribbon feed pawl mounting bracket asm. has been redesigned to mount the torque bar guide clip. [THIS BRACKET (APM, FRAME 262) SHOULD BE ADJUSTED DOWN TO ITS LOWEST LIMITS. THE ADJUSTMENT OF THE FEED CAM FOLLOWER BRACKET TO ALIGN THE PAWL IN THE FEED WHEEL (15-73) (APM, FRAME 262) IS NOW PERFORMED ON THE FTB LEVEL BY FORMING THE REAR OF THE RIBBON FEED PAWL.] FORM THE FEED PAWL ASM. TO CENTER THE FEED PAWL IN THE WINDOW OF THE FEED WHEEL.

(Continued On Next Page)

Check that the ribbon feed pawl mounting stud (Figure 2) clears the lift control lever by a minimum of .010" (0.25 mm) with the machine in the low lift position.

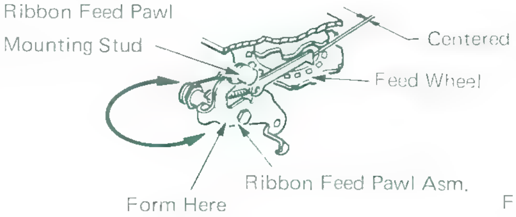


Figure 2

The shift interrupter mounting bracket (26-91) used on the new FTB mechanism is now the same one used on all X3 and X5 non-correcting. However, it does use a new mounting screw (16-69) (26-92).

Below 8X3 — 1598062, 8X5 — 2967661.

1 CORRECTING TAPE FEED — REDESIGNED (CEM 324) (10/76)

The correcting tape feed parts have been redesigned to facilitate manufacturing. When replacing the early level feed pawl and link asm. (26-4), it will be necessary to order ref. 4, 5, and 216 (Fig. 1).

MECH. 26

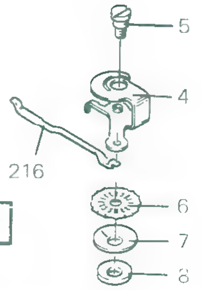


Figure 1

2 STALLING DURING CORRECTIONS (CEM 338) (4/77)

Check for two possible conditions: Some machines may have reached the field with two washers (26-7) installed. Also, it is possible that some washers are out of specification and can apply excessive pressure. If two washers are found, remove one and if binding still occurs, replace washer and lubricate with No. 23 grease.

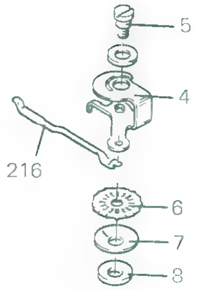
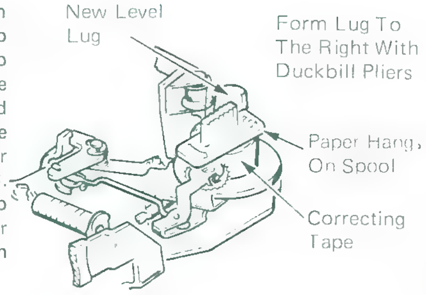


Figure 1

Recovery Code Expired (3/78)

3 TAPE TAKE UP SPOOL — PAPER INTERFACING (CEM 344) (5/77)

If experiencing problems with the correcting tape take up spool interfering with the top face of cards or forms, the new level lug can be formed to the right. This keeps the paper from hitting the upper flange of the take up spool. Also, it may be necessary to readjust the lug front-to-rear for clearance to the platen (APM frame 331).

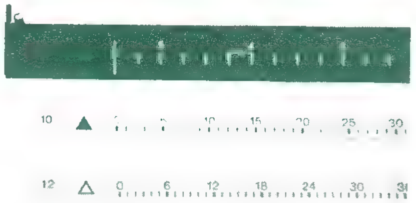


COVERS & MOUNTING

4 PAPER TABLE AND MARGIN SCALE GRAPHICS (CEM 62) (8/70)

Universal erasing tables. Easier to read. Easier centering. Paper tables are marked in inches, beginning at the center.

Margin scales have pitch identification at left end. A filled triangle indicates 10 pitch; an oper triangle, 12 pitch.



5 MARGIN TRIM INSTALLATION (10/68)

Margin trim is held in place by glue. The glue is activated by soaking with IBM cleaning fluid. After the glue has become sticky, install the margin trim on the covers.

This can be applied to loose scales also. Simply reactivate the glue with cleaning fluid and reinstall the trim. Often there is no need for trim replacement.

6 MARGIN TRIM — SCRATCHED (1/74)

Appearance "Selectric" Typewriter: Scratched margin trim may be restored to its original "brushed" finish by polishing the aluminum trim with Durite® abrasive paper.

7 SERVICE HISTORY INSERT (1/74)

The recommended location for the service history insert on "Selectric" II typewriters and "Selectric" typewriters with snap-off covers is behind the left cover latch.

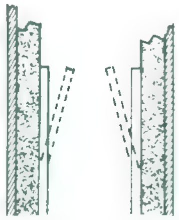
On "Selectric" typewriters manufactured before snap-off covers, a clip (04-49) (P/N 1138386) is available and can be used for mounting the insert to the bottom cover.

8 COVER REMOVAL — FRICTION FIT (10/68)

Care should be used when removing Model 72 bottom case. Insertion of the screwdriver blade between the cover sections may result in damage to the cover paint. The bottom cover section should be removed by inserting a screwdriver blade through the shipping holes at the bottom and applying outward pressure, using the power frame as a fulcrum point.

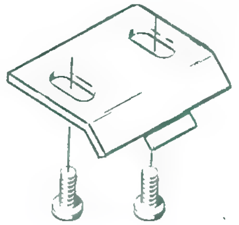
9 COVER LATCH LEVERS — SERVICE HINTS (10/68)

The top of the center cover latch levers may be formed sightly toward the center of the machine for easier operation of the lever when servicing the "Selectric" Typewriter. Care must be exercised when forming the LH latch lever on 721 machines. If the angle is too great, the lever may contact the carrier assembly when carrier return is operated and the margin is set at position 0.



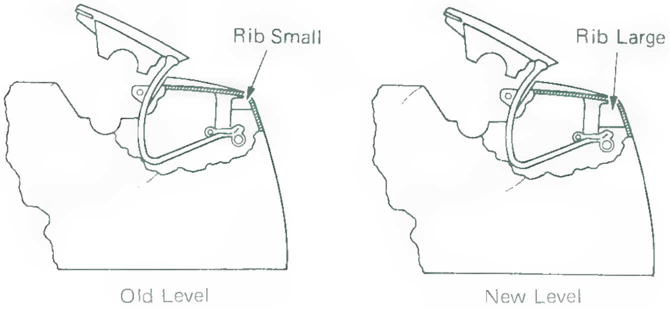
10 TOP COVER BRACKET (10/68)

The I/O top cover bracket (P/N 1135462) can be used on former level covers. This will ensure a more positive "cover up" position. Two screws (P/N 38235) are needed because of the bracket thickness. These screws are in Parts Packet No. 2.



1 COVER HINGE AND BRACKET – REDESIGNED (CEM 245) (4/74)

Replace both the cover hinge (05-006/049) and bracket (05-004) when either needs replacing on old level machines.



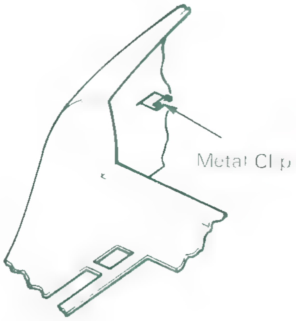
Old Level New Level

2 CENTER COVER 7X1 – POLYESTER – WEAR (CEM 286) (4/75)

Provide top cover with a new latching surface.

SYMPTOM: Top cover latches can wear notches in the latching surface of the center cover.

Install one metal clip on each side of the cover where the latches strike (Figure 1). Clips can be formed for a more positive fit.



Recovery Code Expired (5-76)

3 PLATEN KNOBS AND VENT GRILLS – BLACK – "SELECTRIC" TYPEWRITER (CEM 287) (9/77)

Platen knobs and vent grills for "Selectric" Typewriter 7X1, 7X3 and 7X5 machines will be available in black only. When ordering a replacement knob, other than black, it will be necessary to order two.

4 ON/OFF BUTTON JAMMED – SOUND PACK MEMBRANE SUPPORT (CEM 325) (9/76)

The membrane support (30-25) should be removed from the keyboard before tilting maching to the upright position. The frame falls under the on/off button, jamming it in the on position.

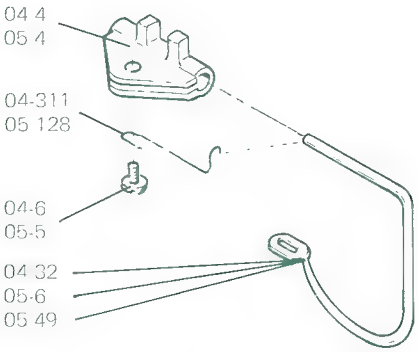
5 PLATEN KBOBS & VENT GRILLS – BLACK (CEM 326) (10/76)

Platen knobs and vent grills for "Selectric" II Typewriter 8X3 and 8X5 machines will be available in black only. When ordering a replacement knob, it will be necessary to order two.

6 TOP COVER HINGE – REDESIGNED (CEM 339) (4/77)

The top cover hinge has been redesigned to a friction type bracket. If replacing a hinge or bracket below the serial number range listed below, it will be necessary to replace the components.

7X1 above approx. S/N 4161710, 7X5 above approx. S/N 4788645, 7X5 above approx. S/N 4444350, 8XX below approx. S/N 1276632 and 2380509.



7 TOP COVER – LATCH STRENGTHENED (CEM 348) (6/77)

The top cover latch (4-83) 7XX and latch (5-2) 8XX have been strengthened. IF experiencing vibrations with top covers, replace latch (gold in color) with new latch (silver in color).

Between approx. S/Ns 7XX-6031956-6033770, 8X3-1584050-1756773, 8X5-2939243-3312409.

Recovery Code Expired (6-78)

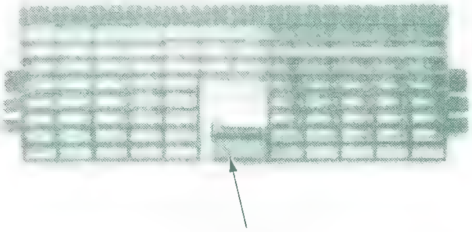
1 MACHINE IDENTIFICATION LABEL (1/74)

All "Selectric" typewriters must be equipped with an identification label showing voltage and current requirements. When covers are replaced, a ribbon mechanism is changed, or the label is missing, order the proper label.

The spaces for the voltage and current requirements on these labels are blank. These requirements must be written or typed in the proper place.

2 MOTOR VENT GRILL DOUBLE INSULATION (CEM 213) (8/73)

Double Insulation: "Selectric" and "Selectric" II Typewriters with the logo "Double Insulation Grounding Not Required" on the rear of the machine or the UL control number "286A" on the patent label must have the extension on the motor vent grill to maintain double insulation standards. If the extension is broken off or is missing, replace the grill.



3 COVER HINGE SCREW – STRIPPED (CEM 311) (3/76)

If the screw hole in the middle cover (where the top cover hinge mounts) is stripped, a possible solution is to use the self-tapping screw (P/N 1190587) to remount the hinge.

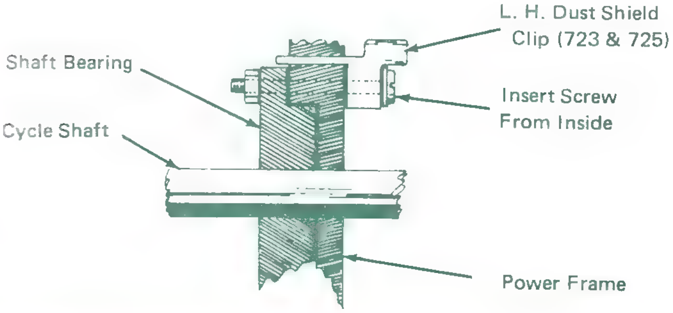
4 COVER INCOMPATIBILITY–7X1 (10/68)

Approximately 2000 Model 7X1 "Selectric" Typewriters between S/N's 5731748 and 5735580 were manufactured using World Trade cover sections. These covers can be identified by the following numbers: 6518613 is cast into the bottom cover on the inside (may be hidden under the foam); 6518503 for the center section; and 6512987 on the top cover.

U.S. cover sections and margin trim are not compatible with these covers. Therefore, if any cover section needs to be replaced on these machines, it will be necessary to replace the complete cover set. Service Code 12 is authorized for the life of the machine for any trouble due to this cover incompatibility.

5 DUST SHIELD CLIP – SERVICE TIP (10/68)

LH Dust Shield Clip: Future service time may be reduced on service calls requiring removal of the LH cycle shaft bearing by reversing the LH dust shield clip (23 and 25) mounting screw. Place the washer next to the screw head; then insert the screw through the dust shield clip and run the screw through the power frame from the inside. The bearing plate will be held by tightening the nut from the outside. When this is done, the dust shield clip and screw need not be removed during future bearing removals.



DEAD KEY

6 DEAD KEY, DEAD KEY DISCONNECT – EXPLANATION (4/77)

The Dead Key Feature removes the escapement trigger from the escapement torque bar lug when typing non-escaping characters. This feature is mainly used in World Trade and nonstandard U.S. keyboards. **This cannot be installed in the field.**

Dead Key Disconnect Feature disables the dead key feature to provide escapement in all typing positions. **This feature can be installed in the field, but only on machines that already have the dead key installed.**

7 DEAD KEY CABLE BREAKING CORRECTING SELECTRIC (296) (7/75)

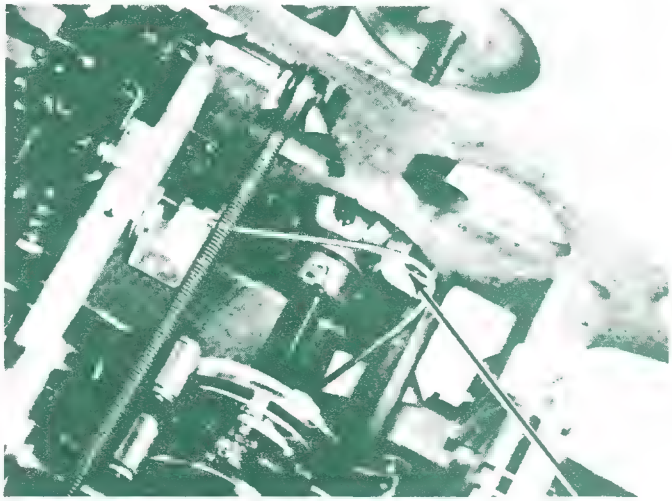
To prevent dead key cables from breaking, a redesigned correcting mode latch bellcrank is now available.

Symptom: Dead key cable breaking in the escapement trigger area.

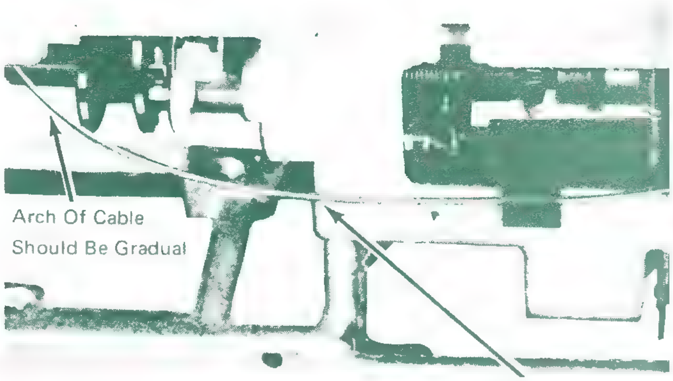
Install the redesigned mode latch, P/N 1206139.

8 DEAD KEY CABLE MAY WEAR GROOVE IN OPERATIONAL SHAFT (10/68)

If the dead key cable assembly contacts the operational shaft, a groove may be worn in the operational shaft deep enough to cause breakage. To remove this possibility, install the dead key cable assembly behind the right-hand dust shield cap. Take up slack until cable just touches clip. Check dead key operation to ensure it is working properly.



(Figure 1)



(Figure 2)

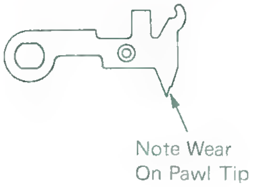
ESCAPEMENT

1 ESCAPEMENT — SINGLE PITCH — SKIPPING (CEM 260) (6/74) (CEM 276) (12/74)

When experiencing skipping during escapement or tab functions, check the tip of the escapement pawl (06-24), P/N 1128201 for wear.

If wear is found, the escapement pawl and escapement rack (06-27) must be replaced. See Parts Manual for proper rack part number.

Quick wear of the new pawl may occur if used with the existing escapement rack.

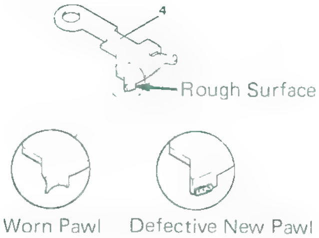


**Recovery Code
Expired 12-1-75**

2 DUAL PITCH ESCAPEMENT — SKIPPING (CEM 159) (5/72)

If skipping or extra spaces on the dual pitch "Selectric" II Typewriter occurs, check the escapement pawl tip for wear. If the tip is worn, replace the pawl. Also, check the escapement rack for wear or peeled plating. Replace the rack if either condition exists.

Check replacement pawls and escapement bracket assemblies to ensure the working surface of the tip is smooth, scrap pawls that have rough or uneven tips.



**Recovery Code
Expired 5-1-73**

3 ESCAPEMENT PAWL WEAR — DIAGNOSIS (10/68)

The following list should aid in diagnosing escapement pawl wear:

1. One of the first signs of wear is tab failures (extra space or spaces) on short tabs of approximately one inch (25,4mm).
2. Excessively load the carrier to the right by hand and operate the repeat spacebar. If there is enough wear, the carrier will skip spaces.
3. With the carrier resting on the escapement pawl, move the carrier slightly to the left by hand, and observe the motion of the escapement pawl on the spring lug. If wear is present, the pawl will move slightly toward the front of the machine as it fully bottoms in the escapement rack. A worn pawl will not be fully bottomed when holding the carrier under mainspring tension.
4. A final check for wear is to feel the working surface of the pawl with a springhook. If the pawl is excessively worn, a slight notch can be felt.

   It is possible that enough wear may be present to cause failures but no notch can be felt. This procedure is only useful when excessive wear is present.

Although the above-listed aids will simplify diagnosing worn pawls, do not overlook the possibility of other maladjustments as the cause of the problem, i.e., tab rack adjustment, pawl clearance, etc.

4 ESCAPEMENT PAWL SPRING REPLACEMENT (10/68)

When replacing the escapement pawl spring, it may take less time if the tab lever and tab trigger are removed. This will allow access to hook up the spring.

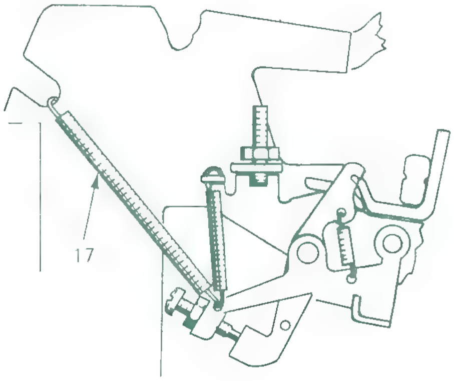
5 ESCAPEMENT SHAFT BEARINGS BIND (10/68)

If escapement failures are caused by a bind in the escapement shaft, the bearings may be hit lightly in or out of the back plate or power frame to better align them with the shaft.

6 ESCAPEMENT — SKIPPING — NEW TRIGGER MECHANISM (CEM 83) (12/70)

The trigger upstop adjustment **must** be made properly on 7X3 and 7X5 machines equipped with the new trigger mechanism. By adjusting the upstop for .001"-.005" (0,03-0,13mm) clearance with the trigger arm, it will reduce the vibration or bounce of the escapement trigger when it restores to the rest position.

Since 7X1 machines do not have an upstop, a spring (06-17) has been added. The spring prevents excessive overthrow of the trigger assembly, reducing bounce when restoring.



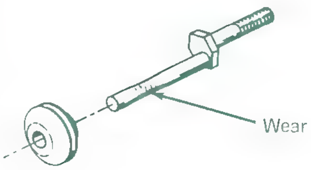
**Recovery Code
Expired 12-31-71**

7 ESCAPEMENT TRIGGER HEIGHT — VARIES (9/77)

On some machines, the escapement trigger height will differ on the two lobes of the escapement cam, resulting in piling or skipping. This is caused by a bent filter shaft or an eccentric escapement cam. In some cases, rotating the escapement cam 180 degrees will adjust this eccentric condition and allow proper adjustment of the trigger height. If this is unsuccessful, replace the filter shaft and escapement cam.

8 ESCAPEMENT FAILURES — OLDER MACHINES (1/74)

Some escapement failures have been caused by wear on the transport cord idler pulley stud. When worn, the pulley fails to track properly and causes a slight bind. See drawing.



1 ESCAPEMENT TORQUE BAR ADJUSTMENT (10/68) (PRINT ESCAPEMENT)

When experiencing a problem where there is not enough motion to remove the pawls from the rack, the adjustment of the setscrew (18-40) should be checked.

This adjustment controls the rest position of the escapement torque bar.

It is important to check all related adjustments after readjusting the torque bar rest position.

Be sure to check out all functions of the machine after making the related adjustments.

2 SPACE-TO-PRINT ESCAPEMENT SERVICE HINTS (1/71)

An uneven typing speed can cause displacement of characters and/or type piling.

DISPLACEMENT:

(Space)

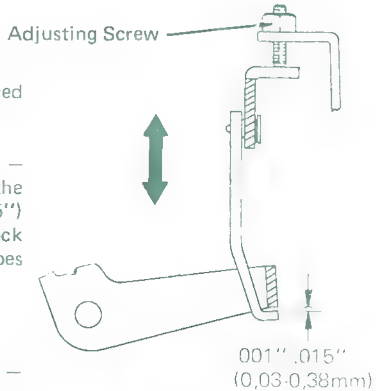
NOW IS (Correct)

NOWIS (Displacement: I was printed in part of the space).

TYPE PILING:

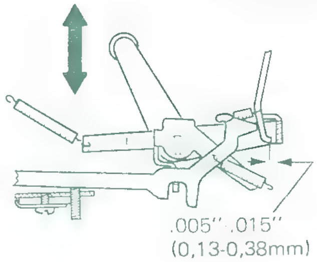
NOW IS (Correct)

NOWS (Piling)



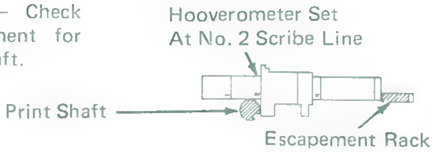
These conditions can be reduced by the following adjustments:

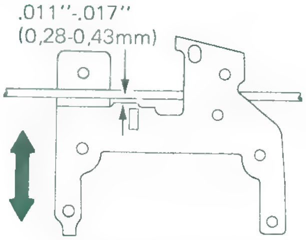
1. Operational Latch Height — Adjust to the low side of the adjustment range (.005") (0,13mm). Be sure to check this adjustment on both lobes of the spacebar cam.



2. Interposer Adjusting Screw — Adjust the interposer adjusting screw so that a front-to-rear clearance of .005"-.015" (0,13-0,38mm) exists between the operational latch and the cam follower. Adjust to low side of the adjustment. Check keylever pawl-to-interposer clearance after making this adjustment (.005"-.015") (0,13-0,38mm).

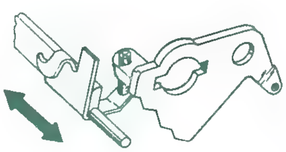
3. Escapement Rack — Check front-to-rear adjustment for parallel with print shaft.





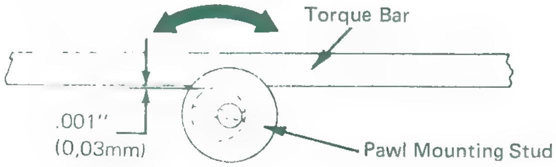
4. Escapement Bracket — Adjust front-to-rear for .011"-.017" (0,28-0,43mm) clearance between escapement bracket and tab torque bar. Check on both ends and center for possible bent torque bar.

Check All Functions



5. Escapement Torque Bar Stop — Adjust for .005"-.008" (0,13-0,20mm) between the escapement pawl lug and torque bar.

6. Escapement Troque Bar Parallel — Observe at both ends and center of torque bar the clearance between the pawl mounting stud and the torque bar.



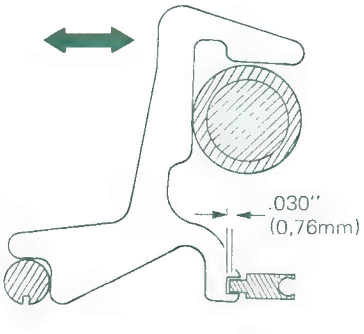
3 ESCAPEMENT — NEW ADJUSTMENT PROCEDURE (CEM 334) (2/77)

This procedure will provide an adjustment sequence to ensure the escapement rail and escapement torque bar are parallel.

It is important when experiencing escapement problems that adjustments are made in the following sequence:

1. Escapement Rack (NRB/S) And (RB/S) — With the print shaft rotated so the keyway is down, adjust the left end of the escapement rail for .030" (0,76mm) between the platen gauge and the escapement rail.

   a. Loosen first three rail mounting screws from left end and adjust the left end with the platen gauge (Fig. 1). After adjusting the left end, tighten the first rail mounting screw. It is important that this screw is tight to prevent loss of left-to-right position of the rail when adjusting the right end.

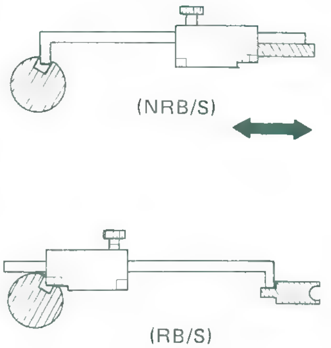


(Right Side View) (Figure 1)

CAUTION: Since the left end of the escapement rack is held in place by the escapement rack bearing plate (07-20), adjusting the rail may cause a bow in the escapement rack or a bind in the sector gear and rack gear. If this occurs, loosen the two escapement rack bearing plate screws. Remove the bind and adjust the switch pitch sector gear.

(Continued On Next Page)

b. Loosen the remaining screws on the right end. With the print shaft in the rest position, back the cycle shaft against the check pawl. Set the Hooverometer to just reach the distance from the print shaft to the escapement rail on the left end (Fig. 2). Using the Hooverometer (Fig. 2), adjust the center and tighten center screw. At this point, it may be necessary to bend the right end of the rail to match the left and center. Adjust the rail using the Hooverometer and tighten screws This procedure will ensure the escapement rail is not bowed and is parallel to the print shaft.



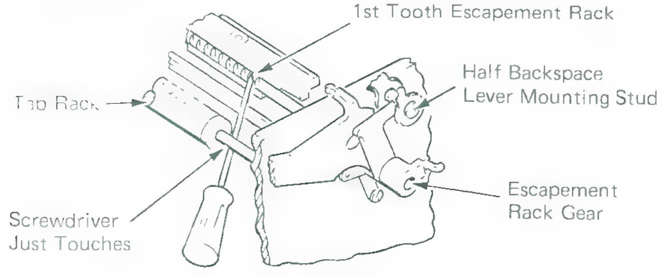
(Right Side View)

(Figure 2)

2. Escapement Rack Gear (RB/S) — With the escapement rack gear stop lug against the half-backspace lever mounting stud, adjust the 10 pitch escapement rack teeth vertically. This can be done as follows: Loosen the escapement rack gear. Insert the blade of a small three inch screwdriver in the first tooth on the left end of the rack. Raise the screwdriver until it touches the tab rack shaft and tap the screwdriver until it is fully engaged in the tooth and the rack stops rotating; then, tighten the rack gear (Fig. 3). This procedure will ensure the rack teeth are vertical.

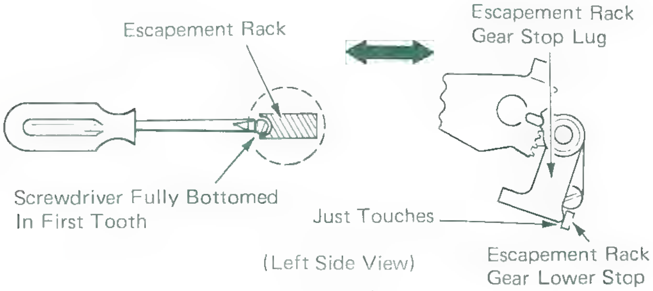
The tip of the screwdriver blade must be square.

10 Pitch Mode



(Rear View) (Figure 3)

3. Escapement Rack Gear Lower Stop (DP) — Form the lower stop toward the front of the machine and insert the small 3" (76,2mm) screwdriver in the first tooth of the escapement rack and lightly hit the screwdriver until it is fully bottomed and the rack stops rotating. Form the lower stop until it touches the escapement rack gear stop lug (Fig. 4).


Escapement Rack
Escapement Rack Gear Stop Lug
Screwdriver Fully Bottomed In First Tooth
Just Touches
Escapement Rack Gear Lower Stop

(Left Side View)

(Figure 4)

4. APM Frame 90 — Switch pitch sector gear (RB/S).

5. APM Frame 91 — Escapement pawl guide lug (RB/S).

6. APM Frame 83 — Carrier shoe (RB/S). This adjustment may be observed by applying grease on the escapement rail approximately 2" (50,8mm) from the right end. Type or space to track the escapement pawl through the grease. Carrier return and look down the rack from the right end and observe the track left by the escapement pawl in the grease. The track should be centered in the rack.

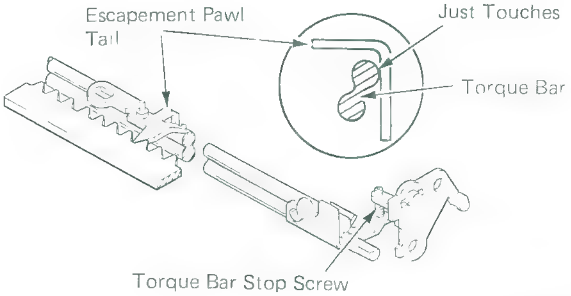
NOTE: The front carrier support adjustment must be checked before making this adjustment.

7. APM Frame 95 — Escapement bracket.

8. Move the torque bar stop (06-39) and backup screws away from the torque bar. Move the trigger upstop out of the way and disconnect the spacebar link (17-307) (dual pitch only). Disconnect the escapement link.

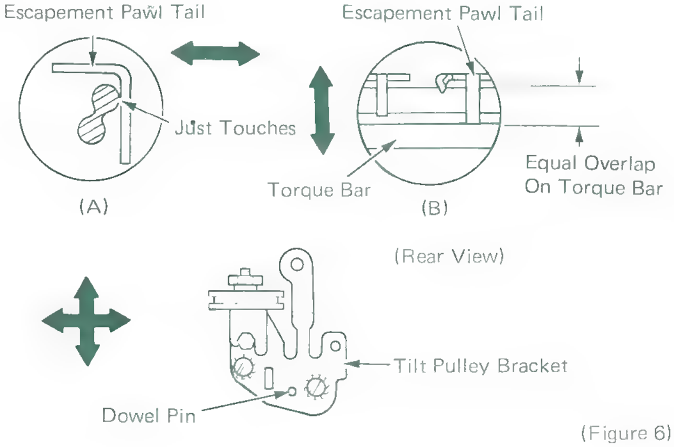
Adjustments 9 through 11 are preliminary adjustments.

9. With the carrier at the left, turn the torque bar stop screw (06-55) in so the torque bar just touches the pawl tail (Fig. 5).



(Figure 5)

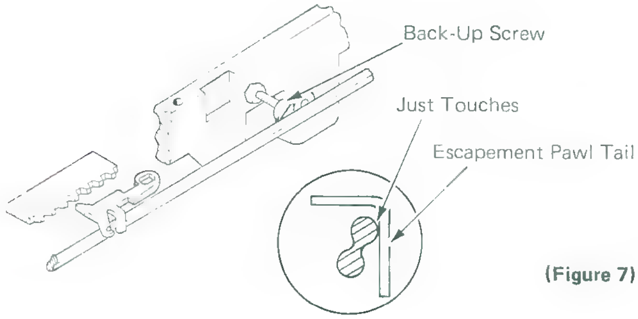
10. With the carrier at the right, adjust the tilt pulley bracket (23-50) so that the torque bar touches the pawl tail (Fig. 6). Adjust as follows: (A). If the tilt pulley bracket does not have the dowel pin (23-54), adjust the bracket front-to-rear so the torque bar touches the escapement pawl tail (Fig. 6A). Adjust the bracket top-to-bottom so that the pawl tail overlaps the escapement torque bar on the right side the same as the left side (Fig. 6B). (B) If the tilt pulley bracket is pinned, it is possible to drive the pin in and adjust as in step 10A.



(Figure 6)

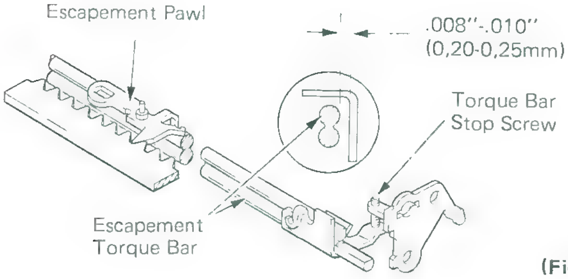
(Continued On Next Page)

11. Move the carrier to the center and adjust the center backup screw so that the escapement torque bar touches the escapement pawl tail (Fig. 7).



(Figure 7)

12. Move the carrier to the left, center and right. Ensure the escapement torque bar is just touching the escapement pawl tail the whole length of the rail. When this condition is met, back the torque bar stop screw out one full turn (Fig. 8). This causes a clearance of .008''-.010'' (0,20-0,25mm) between the torque bar and the pawl tail.

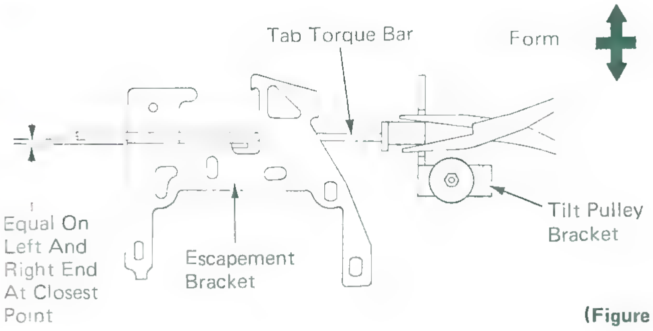


(Figure 8)

13. Adjust the left torque bar backup screw (06-13) (07-13) to just touch the escapement torque bar.

14. With the carrier at the left, check the clearance between the tab torque bar and escapement bracket. Move the carrier to the right and form the tilt pulley bracket lug so the clearance at the closest point between the tab torque bar and escapement bracket matches left side (Fig. 9).

The carrier return latch keeper (03-575) must be removed to make this adjustment.



(Figure 9)

(Continued)

15. Reconnect escapement link and S/B link.

16. APM Frame 106 – Torque bar backstop.

17. APM Frame 108 – Escapement cam.

18. APM Frame 109 – Escapement trip link.

19. APM Frame 110 – Trigger knock-off.

20. APM Frame 111 – Trigger unstop.

21. APM Frame 137 – Spacebar link (RB/S).

22. The following procedure may be used to ensure the escapement rail, print shaft and escapement torque bar are parallel. With the machine on, pull the escapement trigger down until the escapement pawl just clears the rack. While holding the carrier with the left hand, move the carrier left and right the full length of the writing line several times, listening to the pawl drag on the tips of the escapement rack. A great difference in sound between the left, center and right ends means that the torque bar and escapement rail are not parallel. Check that the escapement rail is parallel and the escapement pawl tail clears the escapement torque bar by .008''-.010'' (0,20-0,25mm) across the writing line. Readjust the necessary adjustments to get this condition.

23. When all adjustments are correct, the carrier should space correctly when slight pressure is put on the left side of the carrier during a repeat spacebar or repeat underscore operation.

Refer to "Selectric" APM (F/N 241-5939-01) for drawings of early level machines.

1 ESCAPEMENT RAIL – RB/S (CEM 332) (1/77)

The escapement rail material has been changed to molded polyester. If replacement is necessary on machines below S/Ns listed, replace screw (07-12) (Figure 1). Order four screws for the 8X3 and six screws for the 8X5.

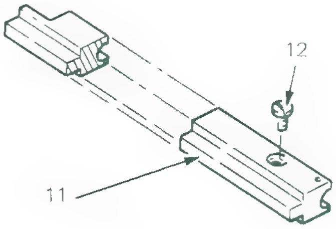


Figure 1

8X3 above approx. S/N 1790000 and 8X5 above approx. S/N 3279000.

1 SINGLE PITCH WITH ROTARY BACKSPACE (CEM 335) (12/77)

The single pitch "Selectric" II Typewriter is now manufactured with rotary backspace. A universal (9, 10 & 12 pitch) backplate asm. will be used on all single pitch machines. All adjustments to the margin tab and rotary backspace are the same as for dual pitch. Rotary backspace should be adjusted to the level 2 specifications in the Adjustment/Parts Manual.

8X3 above approx. S/N 1761000 and 8X5 above approx S/N 3324000.

2 TORQUE BACKUP SCREW NUT – DISCONTINUED (CEM 346) (5/77)

The left hand escapement torque bar screw nut (07-61) has been discontinued on all (RB/S) "Selectric" II typewriters. The escapement rack torsion spring (07-48) will provide the necessary tension to hold the screw in place.

FRAMES

3 CENTER BEARING – REPLACEMENT (CEM 92) (1/71)

A tool is available for replacement of "Selectric" Typewriter center bearings (08-30).

If normal maintenance techniques fail to clear up the problems listed below, the problem may be caused by a worn center bearing.

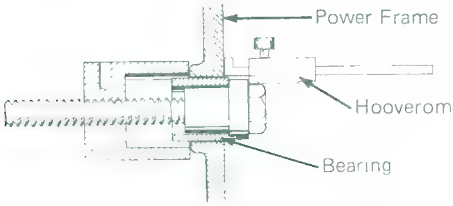
1. Typehead detenting keeps changing.
2. Decrease in motor speed.
3. Negative 5 latch adj. keeps changing.

The following procedure should be used when checking for a worn bearing.

Remove headplay in the clockwise direction and note the position of a typehead tooth to the rotate detent.

Push down and toward the front on the cycle clutch pulley. If there is more than .040" (1,02mm) movement from the point noted, the bearing should be replaced (.040" [1,02mm] is approximately 1/2 the distance from the top of a typehead tooth to the bottom of the notch.). The following procedure may be used to replace the bearing:

1. Remove the cycle shaft, cycle clutch pulley, cycle clutch latch and slide the operational shaft to the right far enough to allow removal of the torque limiter and the carrier return and tab pinion gears. The cycle shaft and cycle clutch pulley should be replaced with new parts.
2. Install the bearing tool as shown in Figure 1. Gauge the position of the worn bearing by placing the Hooverometer foot against the power frame and slide the Hooverometer head against the bearing pusher. This setting will be used to reposition the new bearing.

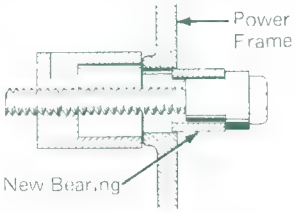


(Figure 1)

3. By tightening the bolt, push the worn bearing out of the power frame.

If the cup turns, a tool can be inserted in the hole near the end of the cup to hold it still.

4. Using a new bearing, install the tool as shown in Figure 2 with the tool "finger" tight. Align the lubrication hole in the new bearing so it will line up with the hole in the power frame when the bearing is installed.



(Figure 2)

5. Press the new bearing into the power frame until the Hooverometer just spans the distance originally measured in step 2 (Figure 1).
6. Reassembly the machine. Be sure to check cycle shaft end play, as it may have changed with the new bearing and cycle shaft assembly installed.

Center bearing tool, P/N 9900523, requires 9/16 wrench, P/N 173995, or similar.

INDEX

1 INDEX FAILURES (CEM 262) (7/74)

The reliability of the carrier return or index mechanisms may be affected by excessive feed roll pressure, binds in the paper feed mechanism or platen latches, binding platen bushings, excessive carrier return torque limiter or spring clutch pressure, or any other malfunction that would cause an increased load on the mechanisms.

On long carriage machines (7X5-8X5), bending of the operational shaft, because of a loose or maladjusted operational shaft support, allows lost motion in the index/carrier return cam system, resulting in occasional failures under heavy loads, i.e., heavy envelopes, thick carbon copies, etc. In addition, if the interposer bail adjustment is marginal, bending of the operational shaft may result in unwanted repeat indexing and/or carrier return operations.

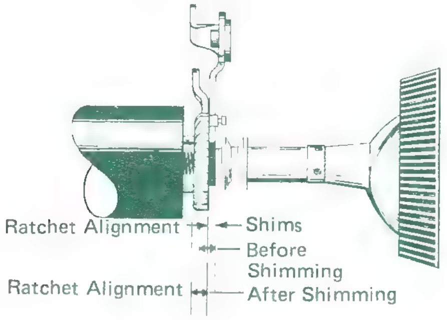
It is recommended that the plastic operational shaft support be replaced with the sintered iron support.

2 INDEX OPERATION – WEAK (CEM 311) (9-76)

If experiencing a weak index operation after completing the index adjustment sequence in APM, check operational shaft support adjustment (25-56). If old level support is on machine, install new level (mech. 25-307).

3 INDEX PAWL & RATCHET ALIGNMENT (10-68)

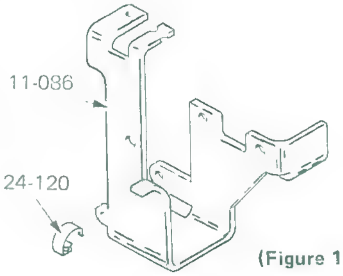
Some indexing failures can be caused by bad alignment of the index pawl and platen ratchet. A combination of nylon shims (P/N 1132674 and P/N 1132327) placed between the platen ratchet and the ratchet retainer will provide proper alignment. These shims are in parts packet no. 8, P/N 1280708.



4 INDEX TRANSFER BELLCRANK STOP LUG – WEAR (LEVEL 1) (307) (12/75)

The index transfer bellcrank stop lug can wear, causing index failures. To provide a new working surface on the stop lug, install metal clip (24-120) (P/N 1147155) on the stop lug as shown (Fig. 1). Clips can be formed for a more positive fit.

NOTE: Check that the index transfer bellcrank does not have excessive side play. Add additional clips (03-632, P/N 1147155) to hold this adjustment, if necessary.



(Figure 1)

Recovery Code
Expired 10-30-76

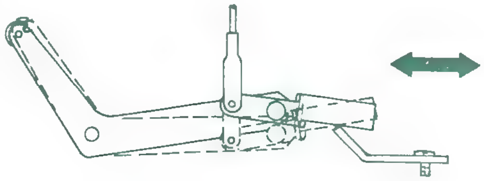
5 INDEXING – 2-2-1/2–3 LINES PER INCH – SER FEATURE (CEM 215) (1/75)

Some "Printing and Publishing" customers are using a modified 54-tooth index mechanism in an OCR application. This mechanism indexes the platen ratchet 4, 5 or 6 teeth, giving 2, 2-/2 or 3 times per inch.

This SER is no longer applicable. It has been replaced by double index. Replacement parts remain available in the APM.

This feature cannot be installed on: 7X1 below S/N 4012015, XX5 or dual pitch machines.

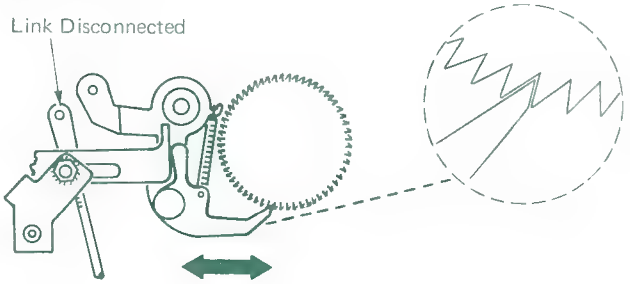
Adj. No. 1

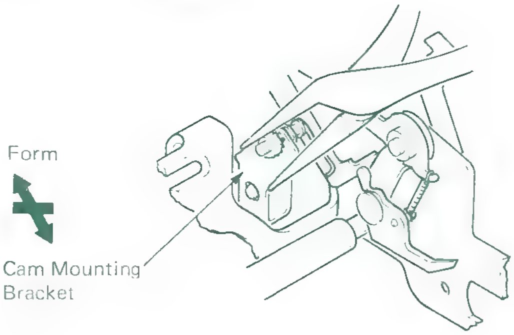


Adj. For 1/2" (12,7mm) Motion Of The Index Link

Adj. No. 2

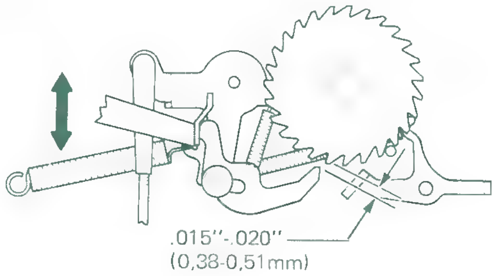
With linespace lever to the rear (6 tooth feed position), adjust for proper pawl entry.





Make adjustment with link disconnected and manually rotate pawl assembly into ratchet. If more adjustment is needed, form the index selector cam mounting bracket (20-327). Do not form the selector cam. The index pawl must contact the index selector cam when at rest.

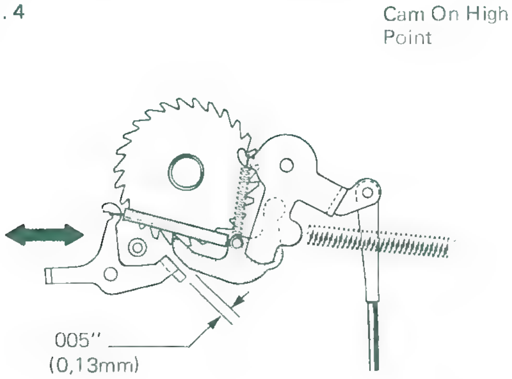
Adj. No. 3



Adjust the index link for .015"-.020" (0,38-0,51mm) pawl tip to ratchet clearance at rest in the 6 tooth feed position.

(Continued On Next Page)

Adj. No. 4



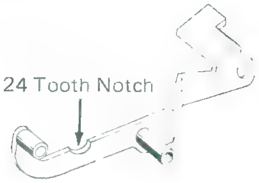
With cam on high point, adjust the platen overthrow stop for .005'' (0,13mm) clearance between the stop and index pawl.

The operation of the index mechanism may be affected by excessive feed roll pressure, binds in the paper feed mechanism or platen latches, excessive C/R torque limiter or spring clutch pressure or any other malfunctions that would cause an increased load on the index mechanism.

The reliability of the repeat operation may be improved by changing the index pawl spring (20-434) to spring, P/N 1147436, and removing spring (20-436).

1 PLATEN DETENT IDENTIFICATION (1/71)

The 24-tooth detent assembly has a notch to identify it from the 27 tooth detent assembly.

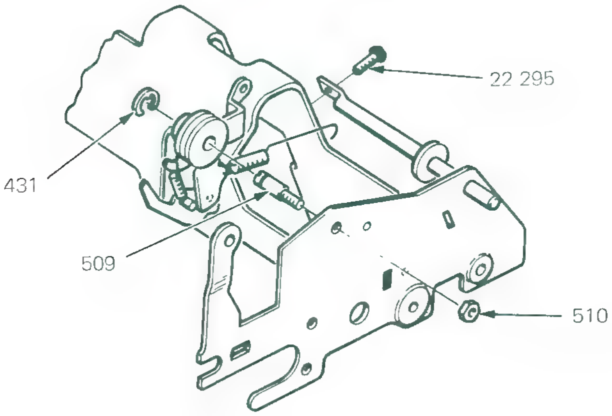


2 INDEX PAWL ASSEMBLY STUD – FIELD REPLACEMENT (CEM 298) (9/77)

SYMPTOM: Index pawl assembly stud loose or broken.

Tap the hole of the paper frame (22-49 or 266) with a 4-40 tap or a self-tapping screw such as the one on the index selector lever mounting stud (22-295). Install the stud (20-509) and nut (20-510).

It may be necessary to form the platen latch to the right to remove interference between the nut and latch. Reinstall pawl assembly and "C" clip (20-431).



3 DOUBLE INDEX MECHANISM (CEM 314) (4/76)

Provides 2, 3, 4 and 6 lines per inch with standard 54-tooth indexing, or 2, 4, and 8 lines per inch with standard 36-tooth indexing for printing and publishing customers with OCR applications. This mechanism provides a second index operation for each carrier return operation, or can be locked out for normal linespacing.

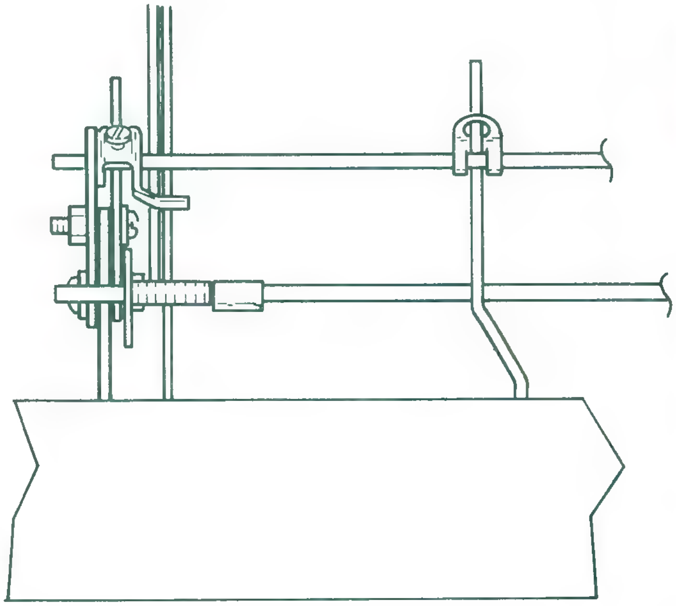
This double index can be installed on all domestic "Selectric," "Selectric" II, and Correcting "Selectric" typewriters, with the exception of machines equipped with the following:

1. Manual velocity control
2; Shift sensing
3. Space to print interlock
4. AVC inhibitor

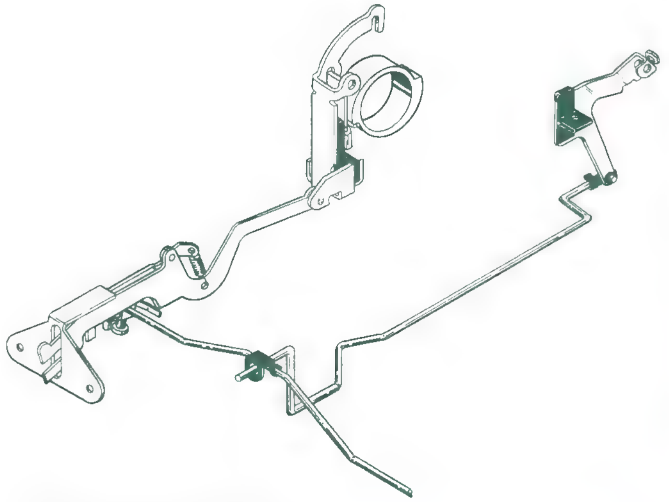
Installation of this double index B/M is billable at current labor rate.

All index adjustments mut be correct. Refer to APM (frame 243 – frame 249).

1. Adjust trip shaft clip (20-33) left to right for slight pressure on the spring (20-31) while in the double index mode.



2. Form the link in the "U" portion so the link has .001'' to .020'' between the link (20-35) and the shift interlock ball.



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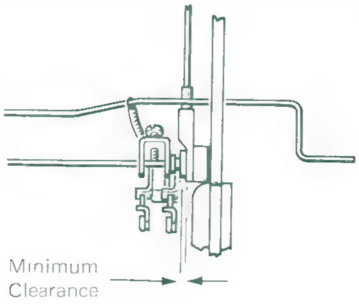
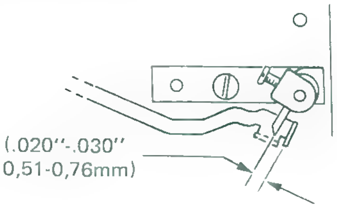
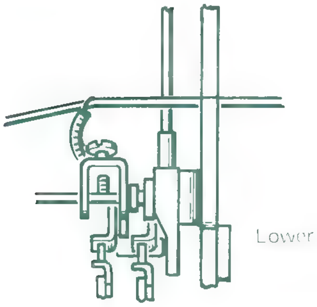
3. Adjust tripper:
   a. Left to right for minimum clearance between the spacer and locator.

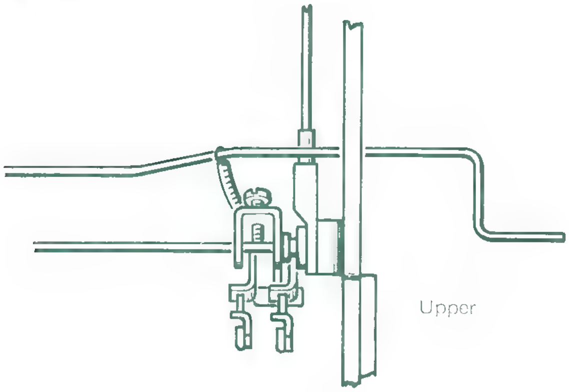


   b. Rotationally for .020"-.030 clearance to the index keylever pawl.

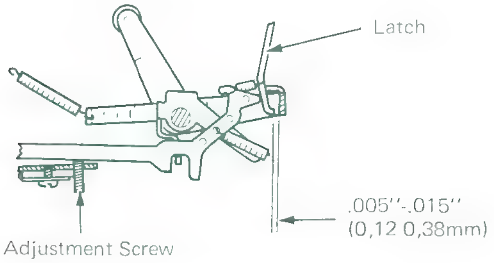


4. Adjust the locator for positive engagement and disengagement of the tripper to index keylever pawl. (Keylever pawl guides may be spread slightly to increase clearance to facilitate positive disengagement.





5. Adjust CR interposer adj. screw for a latch clearance of .005"-.015" (0,12-0,38mm).



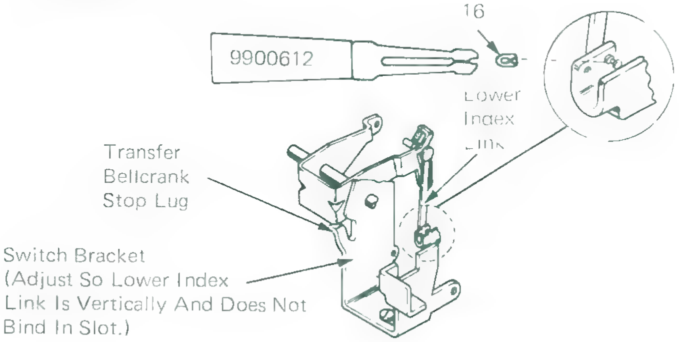
If experiencing extra C/R cycles, increase this adjustment to .030".

1 LOWER INDEX LINK C-CLIP – REDESIGNED (CEM 333) (1/77)

The lower index link (20-16) C-clip has been redesigned to eliminate clip breakage.

Caution should be taken when installing the clip. It is possible to damage the clip by applying too much pressure. Use the new C-clip applicator tool (P/N 9900612) and push clip over stud to the first opening. Also check the following areas:

1. Check that index transfer bellcrank stop lug is not worn (CEM 307).
2. Check that index transfer bellcrank (20-14) does not have excessive end play. Add additional bail clips (03-632, P/N 1147155) to hold this adjustment if necessary.
3. Ensure that the lower index link is vertical. If not, it can create pressure on the C-clip. Adjust the switch bracket left or right for this adjustment.

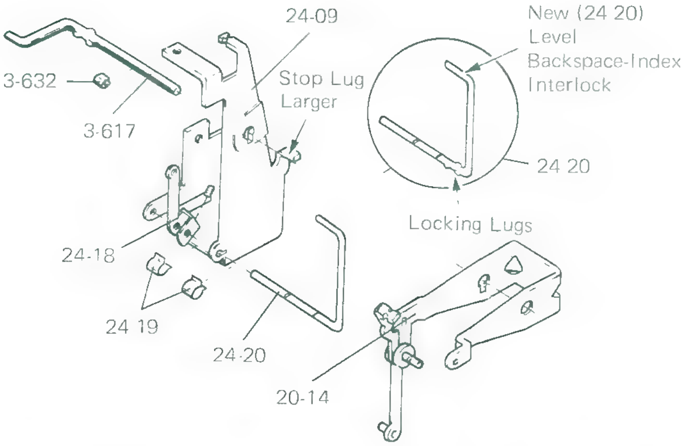


8x5 between approximate S/Ns 2973000 & 3290000, 8x3 between approximate S/Ns 1600000 & 1740000.

**Recovery Code
Expired (1-78)**

2 INDEX TRANSFER BELLCRANK, SWITCH BRACKET AND BACKSPACE INDEX INTERLOCK – REDESIGNED (CEM 341) (5/77)

The backspace interlock clips (24-19) and the index transfer bellcrank shaft clip (03-632) have been removed. The new parts have locking lugs that hold the parts together. When replacing either switch bracket (20-14), backspace interlock (24-20), or the index bellcrank shaft (3-617), it will be necessary to change all three parts below the S/N ranges listed.

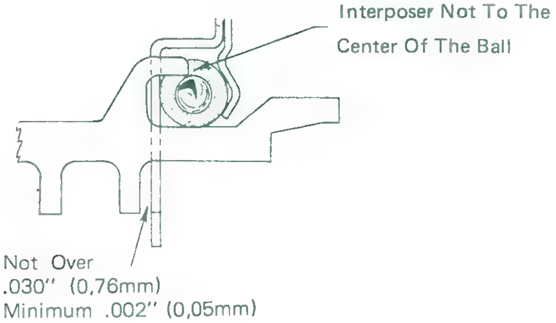


8X3 below approx. S/N 1640000; 8X5 below approx. S/N 3054000.

KEYBOARD

1 TOUCH PROBLEMS (10/68)

Touch problems can occur if the rear lug of the interposer is contacting the rear interposer guide comb. There should be a minimum of .002" (0,05mm) clearance. If not, the two keylever fulcrum support mounting studs may be loosened and the guide hit lightly to the rear. If excessive clearance (more than the pusher end of the spring hook) is present, bridging (malselection) can occur. The reason is that the interposer does not extend into the compensator balls far enough.

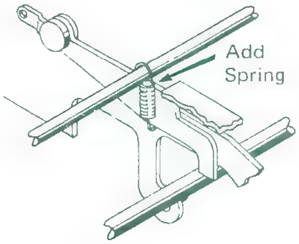


2 KEYBOARD TOUCH PROBLEMS (1/74)

Some touch problems on the "Selectric" Typewriter can be caused by the selector latch bails resting on the lugs of the selector latch interposers. The lugs should clear the bail by .001" - .005" (0,03 - 0,13mm).

3 FLICKING (10/68)

A spring, P/N 1090343, may be added between the cycle clutch trip bail and the pawl of the cycle clutch link to reduce bail bouncing.



4 SLOW OR HARD KEYBOARDS (1/71)

A slow or hard keyboard may be caused by the one-piece keyboard locking interposer being partially engaged in the bail compensator tube. Check the adjustment of the keyboard locking bail and ensure that it positively locks the keyboard with the switch in the off position, yet unlocks the keyboard in the on position and allows the locking interposer to clear the compensator balls.

Note: The blue tip of the locking interposer spring should be attached to the interposer.

5 KEYLEVER SIDE PLAY (10/68)

Excessive side movement of keybuttons while typing may be stopped by installing a .003" (0,08mm) shim, P/N 1141176, between the affected keylever and its bearing support slot.

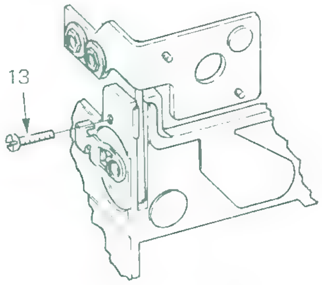
6 BIND IN MANUAL VELOCITY CONTROL MECHANISM (1/71)

On some machines with the manual velocity control mechanism, a bind may exist between the lower velocity cam follower spring and the velocity selection lever. To prevent the bind, washer (P/N 45639) can be installed between the spring and the C-clip on the latch mounting stud.

7 LOOSE KEYBOARDS (CEM 47) (1/70)

A better keyboard mounting screw (08-13) can be installed to correct loose keyboards.

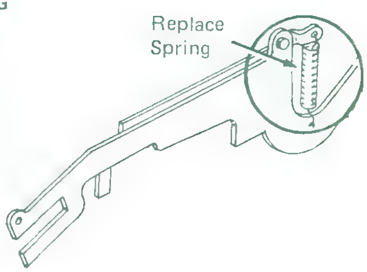
The screw can be used on any 7X3 or 7X5 machine. On early machines the outboard hole is the same size as the inboard hole and the screw head cannot and should not be tightened up to the power frame or breakage of the screw or frame will result. (Be careful to align keyboard and power frame holes.) Later machines have a larger outboard hole. Use of hex-head screw, P/N 1138975, (N/L 185) must be discontinued.



**Recovery Code
Expired 12-31-70**

8 CYCLE CLUTCH LATCH RESTORING SPRING (CEM 69) (10/70)

Some machines may have been shipped to the field with a heavy spring on the cycle clutch latch. If experiencing a "heavy" or "tight" keyboard, replace this spring with P/N 1123827.



9 CYCLE CLUTCH LINK BINDS (10/68)

Keyboard lock-up may be caused by a bind in the cycle clutch latch link. It is necessary to form the cycle clutch latch bracket so the link runs straight back.

10 CYCLE CLUTCH KEEPER ADJUSTMENT (10/68)

Adjust up or down so the clutch release pawl will pass under the keeper by .001" - .002" (0,03 - 0,05mm) when an interposer is latched down. To check this adjustment, use the following procedure:

1. Latch down an interposer.
2. Hand-cycle the character until that interposer is released from the compensator tube.
3. Latch the same interposer a second time (placing that character into storage).
4. Continue hand-cycling until the cycle clutch latch is point-to-point with its keeper during the restoring part of the first character's cycle.
5. The cycle clutch latch keeper may now be moved up or down and the cycle clutch latch will not move in the latched mode so the .001" - .002" (0,03 - 0,05mm) clearance can be observed and adjusted.

11 KEYLEVER REMOVAL TECHNIQUE (10/68)

The following is an effective way to remove keylevers:

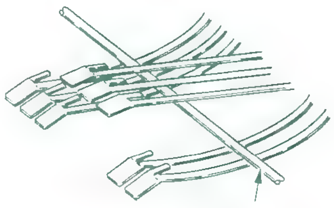
1. Remove top cover.
2. Remove keybutton.
3. Remove margin rack from right-hand side.
4. Loosen bell bail lever.
5. Lift up bellringer bail (do not remove completely).
6. Drop keylever from fulcrum rod and pull keylever out toward the rear of the machine.
7. Reverse this procedure to install new keylever.

This should not be done in cases where loose keybuttons are a problem, i.e., automatic letter writing machine, etc.

1 KEYLEVER TENSION SPRINGS – REINSTALLATION (10/68)

The keylever tension springs may be restored to their operating position with the covers on. Insert a spring hook through the opening around the spacebar keybutton and reposition the displaced spring.

2 INTERPOSER RESTORING SPRING – REPLACEMENT (10/68)



When replacing an interposer restoring spring, it will help if the keylever pawl leaf springs are put over the top of the bellringer bail while installing the interposer spring. Move the bellringer bail forward and position the leaf spring over it. Reverse the procedure to position the leaf spring on the keylever pawl. Be sure the leaf spring is in the notch of the keylever.

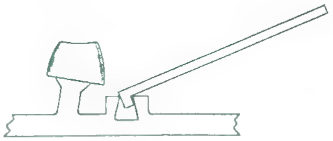
3 KEYLEVER RESTORING SPRINGS (10/68)

Keylever restoring springs should be lubricated with no. 23 grease in automatic typing applications.

4 KEYLEVER PAWL BREAKAGE ON ROBOTYPER OR AUTO-TYPIST (10/68)

Because of the dual stroke control, keylever pawl breakage is a continuing possibility for "Selectric" Typewriters on the Robotyper or Auto-Typist. Machine operators should be instructed not to operate the robot unit unless the typewriter is running.

5 HOOVEROMETER AS KEYLEVER FORMING TOOL (1/71)



The "L"-shaped part of the Hooverometer can be used as a keylever forming tool to expand the keylever lugs. This procedure is easy and safe to use. Lift up to expand lugs. Use duck bill pliers to close the lugs.

6 BROKEN KEYLEVER SPRING– REPLACEMENT (CEM 311) (9/76)

A broken keylever spring problem (21-135, 136), may be fixed by removing the unused leaf spring from ref. 135 and sliding it between the broken leaf spring and the guide comb (ref. 137 or 138). The screws (ref. 140), should then be tightened.

7 SELECTOR COMPENSATOR ADJUSTMENTS – OLD LEVEL (10/68)

A quick way of adjusting the selector compensator ball end plugs is as follows:

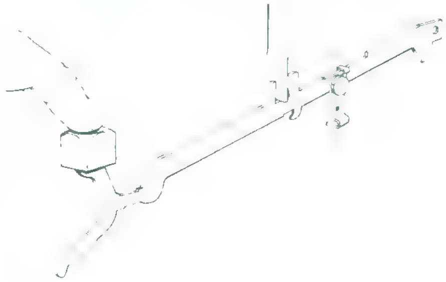
1. Loosen the locking setscrews enough to turn adjusting plug (friction-tight).
2. Latch the left end interposer down.
3. Tighten LH adjusting plug so the balls hold the interposer in the latched position when the interposer latch is disengaged.
4. While holding the interposer latch spring out of position, back out adjusting plug until interposer restores freely. Then back out adjusting plug 1/6 turn more. (One flat of the hexagon nut is 1/6.)
5. Repeat the same procedure on the other side.
6. Tighten locking setscrews.

8 INTERPOSER SLIDING OFF THE FILTER SHAFT (10/68)

During a hand-cycled operation it is possible that the B, W, Y, Q interposers will slide off the filter shaft before the interposers have made the correct selection. This happens because of the minimum loading of the interposer on the filter shaft through the interposer latch link. Providing the interposer-to-filter shaft adjustments are correct, no failure will occur during a power operation.

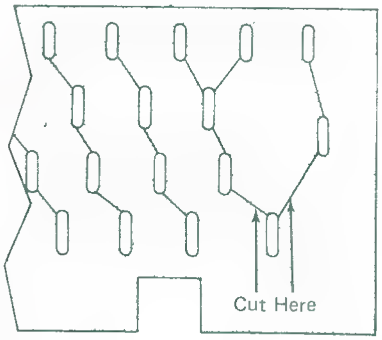
9 KEYBUTTONS – REPLACING (1/74)

When replacing a keybutton, use the following procedure: disconnect the linecord, turn the switch to the ON position, and hand-cycle the machine while holding the keylever down until the interposer is out from under the keylever pawl. This will allow the interposer to enter the selector compensator and prevent the keylever pawl and interposer from being bent or broken when pressure is applied to the keybutton. If more than one keybutton is replaced, the machine should be cycled each time to allow the next interposer to enter the compensator.



The end of the 6" (152,4mm) screwdriver can be placed in the forming slot of each keylever to prevent the slot from closing up when placing pressure on the keybutton.

10 KEYBOARD INSULATION – REPLACEMENT (1/71)

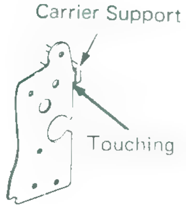


When a "Selectric" Typewriter has been given a chemical cleaning, time can be saved if the replacement keyboard insulation, P/N 1133637, is first cut between the keybutton stem holes before installing it on the keyboard. (See illustration.)

The keybuttons need not be removed for insulation replacement. Beginning at the left side, position the rear part of the insulation under the rear row of keybuttons. Use caution when stretching the insulation under the remaining keybuttons. Remove all wrinkles, folds and twists from the insulation so no open areas exist in it.

11 KEYBOARD OUT OF POSITION (CEM 266) (8/74)

When experiencing multiple functional and typing failures on newly installed machines, check to see if keyboard is properly positioned. It is possible that the keyboard will be tight, but not properly positioned. On XX3 and XX5 it should be touching the carrier support. If necessary, reposition keyboard before making any adjustments in these models.



1 KEYBOARD TOUCH (CEM 277) (5/75)

Some machines may have reached the field with oversized compensator tubes.

SYMPTOM: A hesitation when a keylever is depressed. This can be detected by alternately depressing position zero and forty-three keylevers. A noticeable hesitation of either keylever indicates a probable oversized compoensator tube.

Tilt machine on its back, loosen the right-end plug and latch out position forty-three interposer. Pushing the end plug snugly against the balls, depress the H keylever until position forty-three interposer flexes slightly to the right and tighten the end plug. Repeat this procedure for the left side of the keyboard using position zero interposer and H keylever. If the hesitation is still detected after these adjustments, replace the keyboard (21-100).

Recovery Code
Expired (4-76)

MARGIN, LINELOCK AND BELL

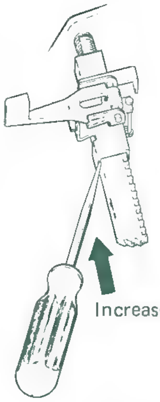
2 MARGIN SLIDERS – BINDING (CEM 194) (3/73)

Binding margins on "Selectric" typewriters can be caused by the machine being too low in the covers. When experiencing this problem, raise the machine so there is a slight clearance between the margin slider and the chrome strip on the center cover.

3 BINDING MARGIN STOPS (10/68)

Binding margin stops can usually be improved by increasing the clearance between the margin stop and margin rack. To make this adjustment, move the margin stops to the far left side to prevent damage to the margin rack.

Polishing the margin rack with Druite® paper can also reduce a binding condition.



4 SWITCH PITCH GEAR ADJUSTMENT (CEM 311) (3/76)

When adjusting the margin switch pitch gear (dual pitch) end play (APM, frame 336), it is necessary to remove all of the motion of the rack within the rail to the left. This can be performed by holding the rail and moving the rack to the left with the right margin slider.

5 MARGIN LEVER REPLACEMENT (10/68)

The margin lever pin can be pushed out of its mounting by use of needlenose pliers. Place one jaw of the pliers on the inside of the bracket and the other jaw on the right end of the pin. Squeeze pliers and the pin will be pushed out. No cutting is necessary and the same pin can be used to mount the new margin lever.

6 MARGIN STOP PIN AND SLIDER INSTALLATION (10/68)

A new pin and slider assembly can be installed without cover removal. Hook the "T" end of the new slider in front of the margin stop where it normally belongs with the pin end aligned above the "U" slots in the margin stops. Pressing down on the pin end with your thumb will push the pin into the assembled position. Use your forefinger to support the rack.

CAUTION: The margin rack must be held from rotating beyond the margin release position.

7 BELL MOUNTING STUD REPLACEMENT (10/68)

The following techniques may prove successful in replacing broken bell mounting studs on machines where the studs have been installed by rivets into the left-hand keyboard side plate:

1. Order P/N 1141117 – bell mounting stud (old-style) and P/N 1118361 – grip clip retainer.
2. Break off remainder of stud or use a file to make it flush with side plate as necessary.
3. Center punch and drill hole through broken stud using no. 28 (3,57mm) drill bit.
4. Tap hole in side plate with 6-32 tap.
5. Install replacement stud in side plate.
6. Attach bell using grip clip retainer, P/N 1118361.

1 MARGIN RACK TOGGLE SPRING — REMOVED (CEM 343) (5/77)

The margin rack toggle spring (10-28) has been removed on all Dual Pitch "Selectric" IIs. The escapement rack gear toggle spring (07-24) has been replaced with a stronger spring to provide the necessary tension to toggle both the escapement rack and margin rack. When either the margin rack or escapement rack toggle springs require replacement on machines with both springs, remove both springs and install the stronger escapement rack spring.

Plant installed above approx. S/N 8X3 — 1736931, 8X5 — 3268887.

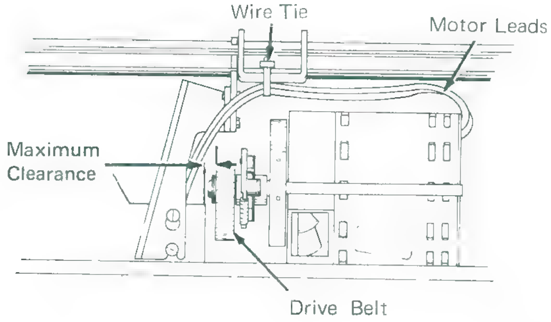
MOTOR AND DRIVE

2 MOTOR REPLACEMENT PROCEDURE (CEM 101) (5/71) (CEM 165) (5/72)

The following is a motor replacement procedure for machines built before the overhead lead motor.

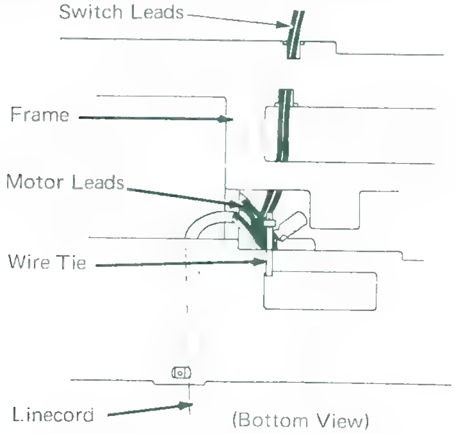
Presently, all 115 volts 60 Hz motors shipped from Lexington are the overhead lead type. When replacing an older motor with this motor, transfer the old mounts to the new motor. Order two mounts, (11-41) (P/N 1174096) if the old motor has hexagonal mounts. Use either of the following procedures according to model and level of machine.

1. Place wire through power frame and connect to the same points as the old motor (Fig. 1).



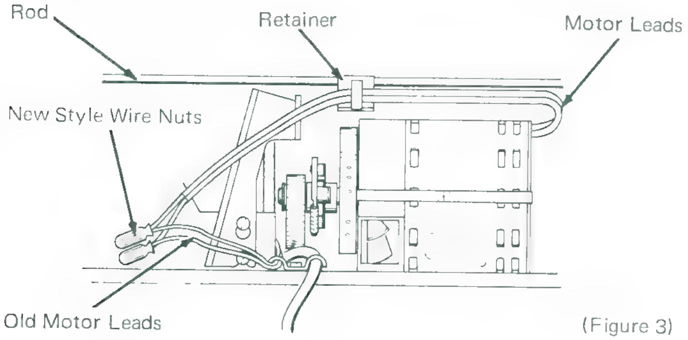
(Figure 1)

Secure leads to power frame with wire tie (Fig. 2).



(Figure 2)

2. Cut the old motor leads at the motor. Run them under linecord or cord clip and attach to new motor leads. (Fig. 3).



(Figure 3)

(Continued On Next Page)

The overhead motor leads must be held up and out of the motor clutch. This can be done with a wire tie or a retainer clip. The clips should be used when there is a possibility that the motor leads may slide into the motor clutch.

Placing the wires past the rotate latches is not recommended. The motor leads are now much thicker and may interfere with mechanisms close by.

Use of this motor on pre-double insulated machines does not raise them to double insulated standards.

CAUTION: New wire nuts (yellow) with the safety skirt must be used. Old style wire nuts do not meet present safety standards.

1 MOTOR – THERMAL PROTECTED (CEM 311) (3/76)

The "Selectric" motor is equipped with an internal thermal coupler that acts as a circuit breaker when it becomes overheated due to an excessive load on the motor. If a motor will not start due to a bind in the drive mechanism, the bind should be removed. Next, the motor should be allowed to cool to give the coupler time to close. This will prevent unnecessary replacement of the motor.

2 LINECORD REPLACEMENT (CEM 82) (12/70)

The use of a replacement type plug is not authorized on OPD "Selectric" typewriters. Double insulation standards applying to current production machines require a molded plug at the end of the linecord.

The same diameter cord must be used for replacement. The older level large diameter cord cannot be replaced with the current level smaller diameter cord. There is not enough insulation on the smaller cord to allow a safe installation without the use of the molded strain reliefs made on the exact replacement cord.

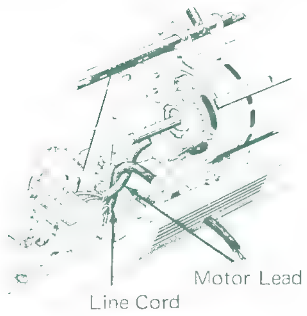
Linecord restraining clamps should hold the linecord tightly. They should be replaced if necessary, not formed to meet this condition. Care must be taken to place the wires so that they do not contact moving parts.

Tight linecords can cause damage to cord insulation, resulting in a possible safety hazard. Leave enough slack in linecords or cable to allow the machine to tilt up.

3 LINECORD AND SWITCH LEADS – ROUTING (CEM 52) (7/70)

When replacing linecord, or switch, be careful to place the linecord over the top and around the motor lead insulating tube. This is necessary to prevent the insulating tube from coming in contact with the motor clutch or drive belt.

(Continued)



4 IDLE NOISE (CEM 268) (9/74)

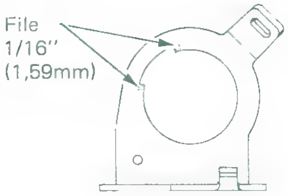
Idle noise on "Selectric" typewriters can be minimized by making the following checks and adjustments:

A. BINDS
  1. Cycle clutch end play/overthrow.
  2. Operational shaft end play.
  3. Shift clutch spring clearance.

B. MOTOR
  1. Drive belt tension/tracking.
  2. Motor should be parallel to frame.
  3. Inspect condition of Mylar® insert.
  4. Ensure weight on clutch pawl is not hitting drive belt.
  5. Inspect condition of rubber motor mounts.
  6. Ensure mounting brackets are not pressing in on motor.
  7. Remove the metal shipping rings located between motor and rubber mounts.

One procedure to remove the rings is to first break them and then twist into a roll with a "T" bender or duckbill pliers. Be sure to check the rubber mounts for proper installation after removing the rings.

  8. The motor mounting bracket slots can be reduced approximately 1/16" (1,59mm) with a file to relieve pinching of the rubber mounts.



C. COVERS
  1. Ensure machine does not contact any part of the covers – copy lever, switch pitch lever, etc.
  2. Machine should be level in the covers and not hitting on the bottom cover.
  3. The copy control lever shaft should not be touching the A-frame assembly.
  4. The service feet should not extend through the bottom cover.
  5. Sound B/M can be used to reduce excessive noise and cover vibration.

1 MOTOR HEAT (1/74)

The temperature warning label is no longer required. However, the operating temperatures of the shaded pole motor are high enough to burn the hand if handled immediately after use. A folded shop towel can be used for protection.

2 STATIC SPARKS IN AREA OF MOTOR (1/74)

Static discharge spark may be noticed on any product with rubber drive belts where the motor is insulated from the power frame.

The condition does not cause a safety problem. If it is unwanted, it can be stopped by replacing either motor cushion ring.

The static build-up was noticed in OPD products in early 1968. At that time, the specifications were changed on all motor cushion rings so that they were just conductive enough to prevent static build-up.

Do not use a resistor, grounding jumper wire or any other fix other than the cushion ring change to eliminate this condition. Make change only where static discharges are noticed between motor and power frame. Normal static discharges, due to build-up on clothing, furniture, etc., which discharge to machine frame or any other metal object, will be unaffected by this change.

3 SPIRAL GROOVE MOTOR SHAFT (10/63)

The Mylar® insert motor pulley can be used on motors that have the spiral groove shaft. It was previously believed that the grooves would raise burrs on the Mylar® insert. Caution should be exercised when installing the insert and pulley to be sure that the insert is not burred, which would result in a clutch failure. When the current level motor pulley is used, it is recommended that the complete motor clutch bill of materials be installed.

4 CURRENT DRAW (SCHOOL INSTALLATIONS, ETC.) (1/71)

The shaded pole motor uses approximately 1.0 amp as compared to approximately .5 amp on a split capacitor motor (Model C). The total number of machines being plugged into one circuit must be considered to prevent circuit over-load. This is particularly important in planning school installations.

5 MOTOR CLUTCH SPRINGS – TENSION (10/68)

Do not shorten the centrifugal motor clutch pawl springs. This allows the pawls to engage at too high a motor speed causing them to bounce on the lugs of the motor pulley. This causes round edges on the pawls.

6 WORN MOTOR PULLEY BUSHING (10/68)

If the motor pulley bushing becomes worn, it can cause a vibration. Replace the bushing (11-44) (P/N 1159211) to correct this condition.

7 MOTOR PULLEY AND BELT WEAR (3/71)

When replacing a drive belt that has worn or stripped out cogs, also replace motor pulley (11-48).

8 BELT REPLACEMENT (10/68)

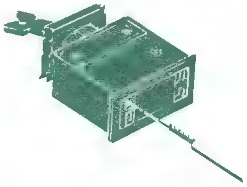
1. Cut off old belt if you do not expect to use it again.
2. Disconnect latch bail springs, pull out latches, drop bail down.
3. Remove cycle cam shaft gear.
4. Remove cycle clutch check latch and spring.
5. Remove two screws and stud holding cam shaft bearing plate, and remove bearing plate. It may be necessary on some machines to remove the compensator from its mounting bracket. If so, follow steps 6 through 7.
6. Loosen print shaft gear, rotate head counterclockwise to loosen tape, and rotate print shaft to detent head.
7. Remove compensator mounting shaft.
8. Work belt off over cam shaft.

Replace in reverse order and adjust or check:

1. Check cam shaft end play, use shims if necessary.
2. Adjust gear train for minimum backlash.
3. Adjust filter shaft timing, shaft end play.
4. Adjust print shaft timing, shaft end play.
5. Check escapement cam timing and spacebar interlock.
6. Check shift interlock cam.
7. Adjust belt tension.

9 QUICK WIRE SWITCHES – LOOSE WIRES (CEM 67) (9/70) (CEM 239) (1/74)

When experiencing electrical or switch problems on machines with the "quick wire" connection switches, it is possible that the wires are not being held firmly in place. If this condition exists, replace the switch.

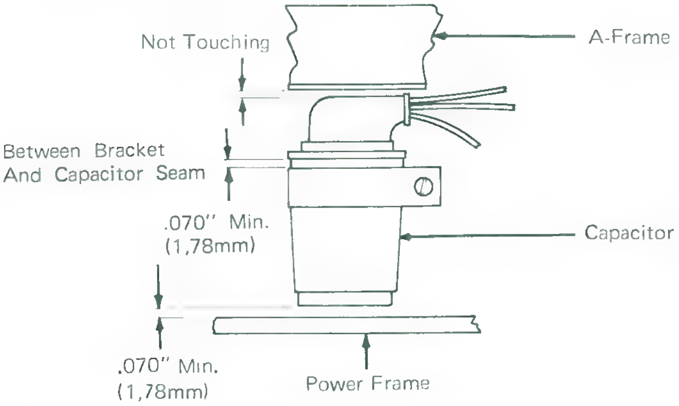


1 CAPACITOR BOOT – "A-FRAME PAPER FEED (CEM 186) (10/72) (CEM 238) (1/74)

On "Selectric" typewriters with "A-frame" paper feed and capacitor start motors, the capacitor boot may touch the "A-frame."

If the capacitor is positioned too high or too low, it can cause the rubber boot to come into contact with the lower extension of the "A-frame." If the boot should wear through, the possibility of an electrical shock exists.

Ensure that the capacitor is properly positioned.



2 RECONDITIONED "SELECTRIC" TYPEWRITER – UL DOUBLE INSULATED (CEM 176) (8/72)

All "Selectric" typewriters reconditioned as of 3-3-72 meet UL double insulation standards requirements which are:

1. Holes in bottom cover where the motor is exposed are plugged.
2. White tubing is placed over the motor leads and is held in place by an additional piece of shrink tubing.
3. The grill vent has the "gate." This prevents the linecord from resting on cover or powerframe.
4. A patent lable containing the following:
   a. The words "double insulated" use only exact replacement parts.
   b. The UL control number 286A.
   c. The word "listed."
   d. The UL Symbol.

The current production "Selectric" Typewriter motor (11-40) is considered an exact replacement part for any reconditioned "Selectric" Typewriter.

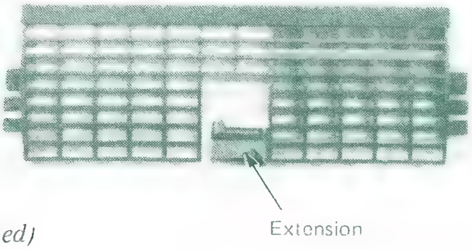
Patent labels and stickers remain the same as production machines.

Double insulation cannot be field installed.

3 MOTOR VENT GRILL – DOUBLE INSULATION (CEM 213) (8/73)

To maintain double insulation standards current level "Selectric" and "Selectric" II Typewriter motor vent grills must have the grill extension. The extension protects the linecord from contact with the bottom cover.

If extension has been broken off or is missing, the grill must be replaced.



(Continued)

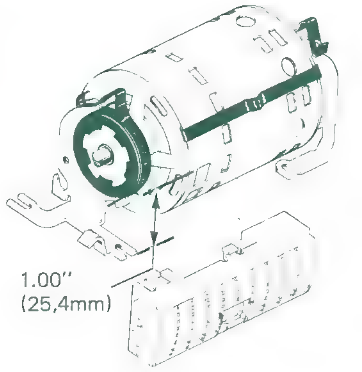
Double insulated machines manufactured before the UL standard for double insulation do not require the extension on the vent grill.

Current level "Selectric" and "Selectric" typewriters with the logo – "Double insulation grounding not required," on the rear of the machine, or the UL control number "286A" on the patent label.

4 MOTOR AND VENT GRILL – REDESIGNED (CEM 122) (10/71)

Some machines were manufactured using a motor with the no exhaust snout. This motor requires a redesigned vent grill for proper direction of motor heat.

If removal or replacement of motor is necessary, rotate the motor so that the top of the upper exhaust opening is 1.00" (25,4mm) above the bottom of the motor bracket. This ensures that the heat from the motor will be directed out of the machine.



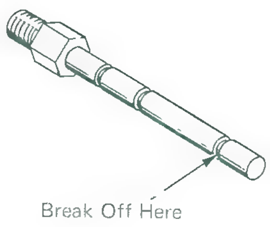
New grill is compatible on all machines with snap-off covers.

5 ON-OFF/TAB KEYBUTTON MOUNTING STUD (CEM 104) (6/71)

The replacement stud announced in CEM 50 is designed for use on both "Selectric" typewriters and "Selectric" I/Os.

If interference between this stud and covers on the "Selectric" is experienced, the end of the stud may be broken off at the first groove of the stud.

Ensure that sharp edges are removed.



OPERATIONAL CONTROL

1 INTERPOSER LATCH (CEM 158) (5/72)

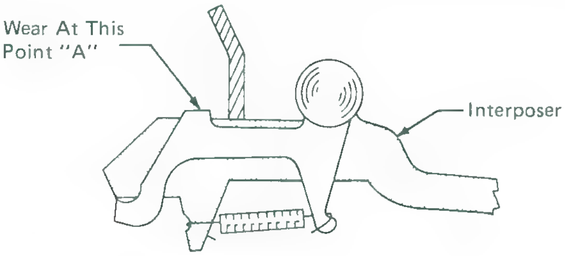
Extra operational functions caused by the latch pawl slipping off the latch plate may be caused by a burr on the interposer latch.

Install new interposer latch.

Recovery Code Expired 5-1-73

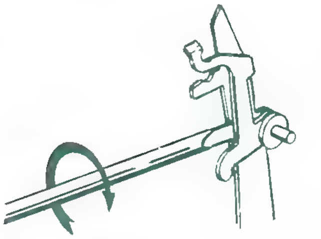
2 UNWANTED OPERATIONS – RANDOM OR EXTRA (CEM 221) (10/73) (CEM 251) (4/74)

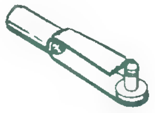
Unwanted operations may sometimes be caused by a worn latch on an operational interposer. A small amount of wear at point "A" may cause the interposer to repeat after a wanted operation or come off due to vibration during normal typing. This results in an unwanted operation. The latch plate should also be checked for wear and replaced if any signs of wear are found.

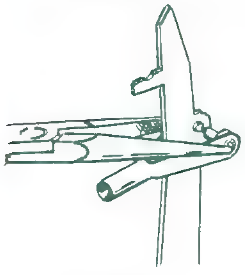


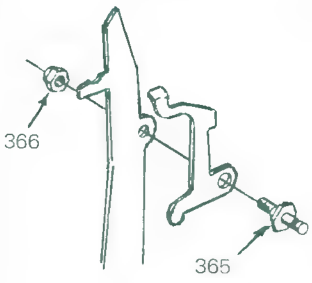
3 OPERATIONAL LATCH REPLACEMENT TECHNIQUE (10/68)

A procedure for removing the rivet from the interposer, when the rivet is stuck in the interposer, follows: Break the head off the rivet, and take a small locking clevis from parts packet no. 6. Cut the hole side just below the pin hole. Insert the clevis with the pin side on the RH side of the rivet and squeeze the clevis with the needlenose pliers. This will usually force the rivet out of the interposer. It may be necessary to use a stone to remove the rivet on the LH side and force the rivet out the RH side.


Step 1


Step 2


Step 3



Step 4

4 INTERPOSER HEIGHT ADJUSTMENT TIP (10/68)

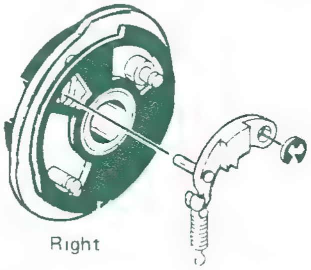
Hold the clutch release arm so the cam repeats and turn in on the interposer adjusting screw until the mechanism begins to operate. Back the screw out until the mechanism stops operating and then give it an additional 1/2 turn.

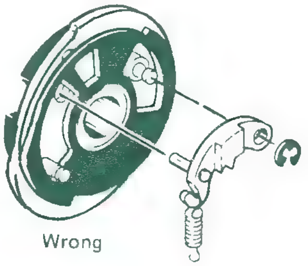
5 INTERPOSER INTERLOCK LINK (10/68)

Retaining clip, P/N 1138464, can be used to prevent the operational interlock from moving to the left on the bail. This will prevent the operational interlock from turning over and causing a service call.

6 OPERATIONAL CAM PAWL INSTALLATION (10/68)

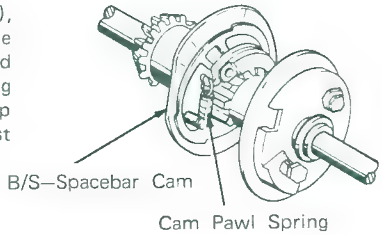
Caution should be used when installing an operational cam pawl to prevent machine lock-up or cam release lever breakage.


Right


Wrong

7 OPERATIONAL CAM PAWL SPRING INSTALLATION – SPACE – BACKSPACE CAM (CEM 108) (8/71)

When replacing a cam pawl spring (25-40) (P/N 1116729), install the spring with the open side of the loop toward the cam. This prevents spring breakage caused by the loop of the spring working against the cam wheel.



8 OPERATIONAL CAMS NOT RELEASING (CEM 240) (1/74)

Failure of an operational cam to release may be caused by a burr on the C-clip (25-203) that positions the operational cam release arm (25-205, 239).

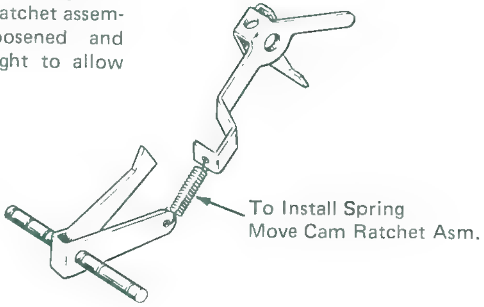
If experiencing intermittent operational failures because the cam fails to release, replace both C-clips.

9 PINION WEAR (10/68)

Tab/Carrier Return Pinion: The working surfaces of the cord drum, tab pinion gear, and the carrier return pinion gear should be free of lubrication. Lubrication of these points will cause erasure build-up and cause wear of the pinion gear teeth.

10 CHECK PAWL SPRING INSTALLATION (10/68)

When installing an operational cam check pawl spring, the operational cam ratchet assembly can be loosened and moved to the right to allow serviceability.



1 OPERATIONAL CAM ASSEMBLY SETSCREW (CEM 70) (10/70)

Setscrew – Cone Pointed: To prevent the cam and ratchet assembly from coming loose on the operational shaft, a cone pointed setscrew, P/N 316781, is being used on Model 7X3 and 7X5 machines. When readjustment of the cam and ratchet assembly is necessary, it may require a slight rotation of the operational shaft since the cone pointed setscrew makes an impression further into the operational shaft than the previous cup-pointed screw.

This change has not been incorporated in the 7X1 because of the frequent readjustment of this assembly, since it determines the endplay of the operational shaft.

2 OPERATIONAL SHAFT REMOVAL TECHNIQUE (10-68)

1. Remove the shift clutch ratchet and clutch spring. Do not maladjust the clutch arbor.
2. Loosen setscrews in torque limiter hub, tab governor hub, tab governor collar, operational cam ratchet (and RH shaft collar if long carriage).
3. Remove clip from CR pinion spring.
4. Push torque limiter hub to the left as far as possible; then, expand the coils on the CR pinion spring and, with the pusher end of a spring hook, push the left hand opinion retainer off the shaft.
5. Move the pinion gear to the left and remove the retainer clip at the right side.
6. The operational shaft may now be pulled out through the shift bearing toward the right. Any part mounted on the shaft or around it may be easily removed or replaced.

Inserting the turning wheel in the operational shaft before removal or installation of the shaft will help in handling the shaft.

The shift clutch arbor is not loosened from the shaft when the shaft is removed. Therefore, when re-installing the shaft, push it in until the arbor is against the shift bearing (.002"-.004" end play) (0,05-0,10mm). This will place the carrier return pinion gear into the same position as before. Since none of the shift mechanism was removed, no shift adjustments are changed.

In order to reset the operational cams in their original position, use the push end of a spring hook to equally measure distance between cams and check pawls. For ratchets which have only one setscrew, be certain the screw is tightened to the flat side of the operational shaft.

Reset the tab governor hub and collar, observing the proper mesh and end play adjustments.

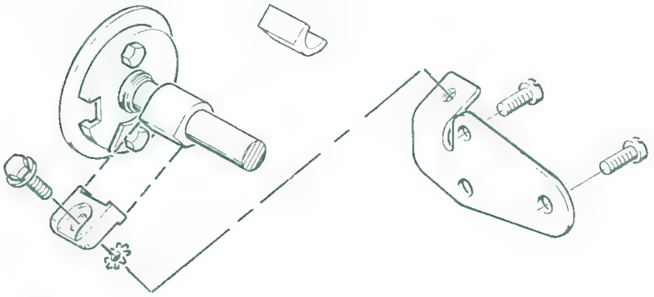
After reinstallation of the C-clip retainers on either side of the carrier return pinion gear, move the torque limiter spring hub to the right as far as possible. Then spread the torque limiter spring loops and insert a .005" (0,13mm) feeler gauge blade between the torque limiter hub and the torque limiter arbor. Tighten the torque limiter hub; then remove the gauge.

Install the clip which connects the CR pinion spring to the torque limiter arbor.

3 OPERATIONAL SHAFT SUPPORT – NEW (CEM 289) (5/75) (CEM 311) (3/76)

Install the ears on the support to both sides of the flat on the bearing using slight pressure. (Do not force the support enough to bend the operational shaft.) Then tighten the screw. Lubricate on each service call.

The field installable B/M uses a cut asway bearing (25-305) which can be installed without removing the operational shaft.



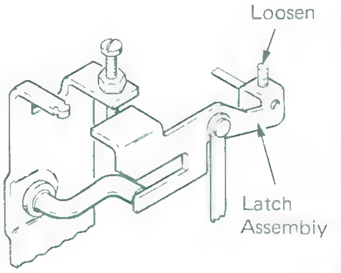
This support replaces old level support. Order the bracket, support, lockwasher and bearing when replacing the bracket or support on the old style.

4 OPERATIONAL CAM FOLLOWER REPLACEMENT PROCEDURE (CEM 301) (11/75)

When necessary to replace the carrier return (25-204) or spacebar (25-202) cam follower, replace both.

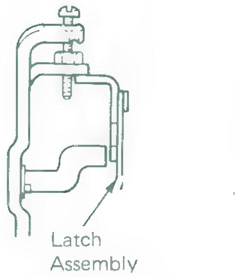
The suggested replacement procedure is as follows:

1. Unplug machine.
2. Remove escapement trip link (07-10).
3. This procedure does not require removal of the operational shaft; however, it may be removed at this time.
4. Unhook CR (25-213) and SB (25-201) cam follower restoring springs.
5. Remove on-off switch from mounting bracket.
6. (RB/S) Remove index interlock link (24-017).
7. Unhook lower index link from multiplying lever.
8. Remove the SB (NRB/S) CR and BS latch springs (25-210).
9. Loosen CR latch assembly setscrew (03-604) and move latch assembly toward center of machine (Figure 1) and pivot up as shown (Figure 2).



(Rear View)

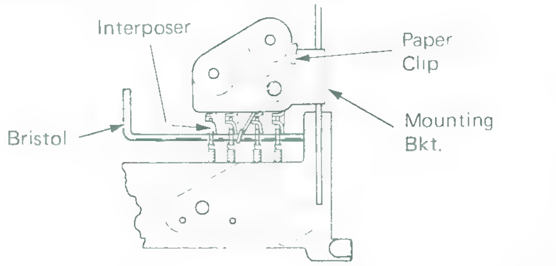
(Figure 1)



(Rear View)

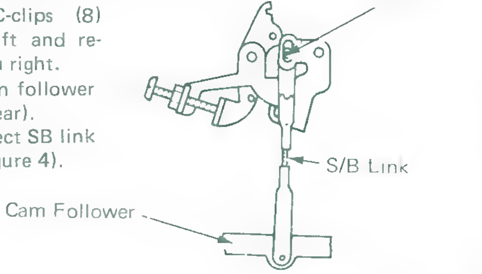
(Figure 2)

10. Install bristol wrench through holes in interposers and attach to RH mounting bracket with paper clip (Figure 3).



(Bottom View) (Figure 3)

11. (Correcting) Unhook correcting keylever link (26-090) and spring (26-081) from mode latch (26 - 082).
12. Remove all C-clips (8) from pivot shaft and remove shaft from right.
13. Remove CR cam follower (from front or rear).
14. (RB/S) Disconnect SB link at top clevis (Figure 4).

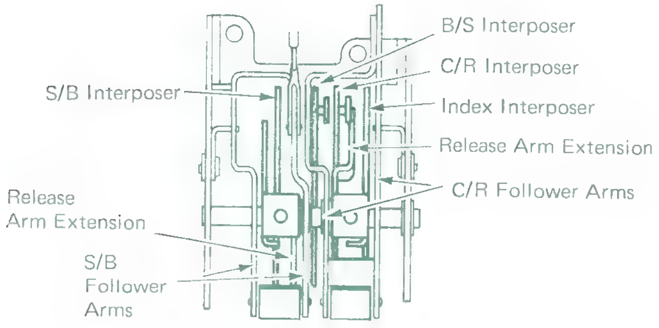


(Right Side View) (Figure 4)

(Continued On Next Page)

15. Remove SB cam follower from front of machine.
16. Replace CR cam follower:

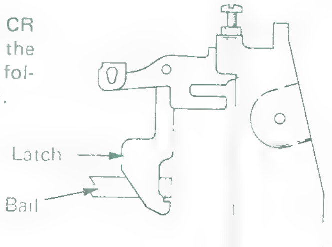
    a. (RB/S) Position the index, CR and BS interposers between the cam follower arms (Figure 5).



(Top View)

(Figure 5)

    b. (RB/S) Position the CR and BS latches to the front of the cam follower bail (Figure 6).

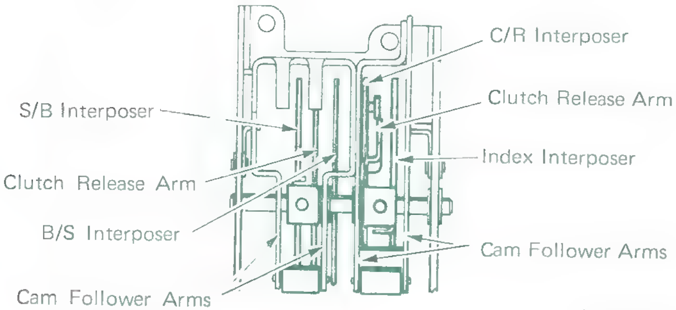


(Right Side View)

(Figure 6)

(NRB/S) Position the index and CR interposers between the cam follower arms (Figure 7).

    c. Position the clutch release arm to the right of the CR interposer (Figure 5 and 7).

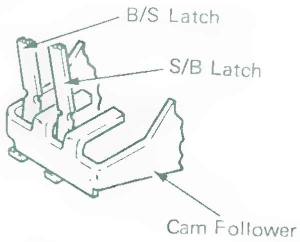


(Top View)

(Figure 7)

17. Install pivot pin through RH cage plate, CR cam follower and clutch release arm.
18. Install SB cam follower:

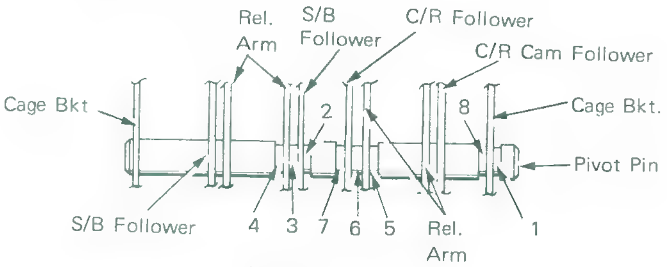
    a. (RB/S) SB link may be installed with the cam follower. With cam follower in place, hook clevis (17-306) to bellcrank.
    b. (RB/S) Position the SB interposer and clutch release arm between the cam follower arms with the clutch release arm to the right of the interposer (Figure 5).
    c. (NRB/S) Position the BS and SB interposers and clutch release arm between cam follower arms (Figure 7) with the latches in their slots and under the cam follower bail (Figure 8). The clutch release arm extension should be between the interposers (Figure 7).



(Rear View)

(Figure 8)

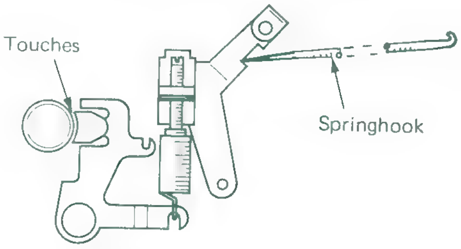
19. Install the pivot pin through the SB cam follower and clutch release arm and install the C-clips in the following order (Figure 9). Number 8 is a bias C-clip.



(Bottom View)

(Figure 9)

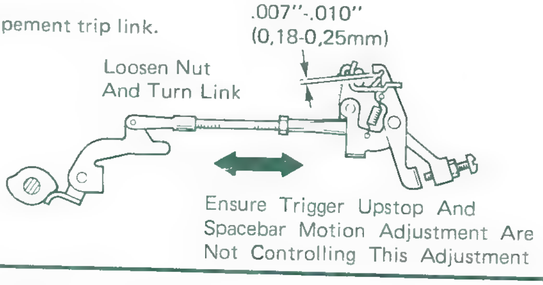
20. Position the CR latch asm. in place and with pusher end of spring hook, push arm against CR spring and tighten setscrew (Figure 10).



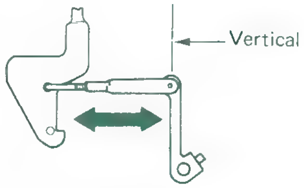
(Level 2)

21. Install index link to multiplying lever (rear hole is for 36 tooth only).
22. Hook SB (NRB/S), CR and BS latch springs. (This is done by half cycling the OP cam while holding latch from under bail. Latches may now be easily accessed.
23. Reconnect CR and SB cam follower restoring springs.
24. Replace index interlock link.
25. Replace on-off switch.
26. Reconnect correcting keylever link and spring.
27. Remove paper clip and bristol wrench.
28. Replace escapement trip link.

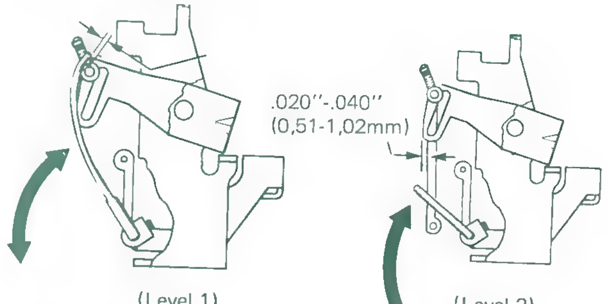
1. Escapement trip link.


.007"-.010"
(0,18-0,25mm)
Loosen Nut And Turn Link
Ensure Trigger Upstop And Spacebar Motion Adjustment Are Not Controlling This Adjustment

2. Index interlock link (RB/S).



3. Index interlock paddle (RB/S).



(Level 1)

(Level 2)

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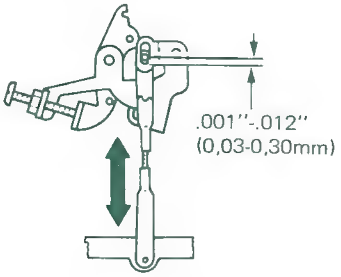
4. All index adjustments refer to APM adjustments.

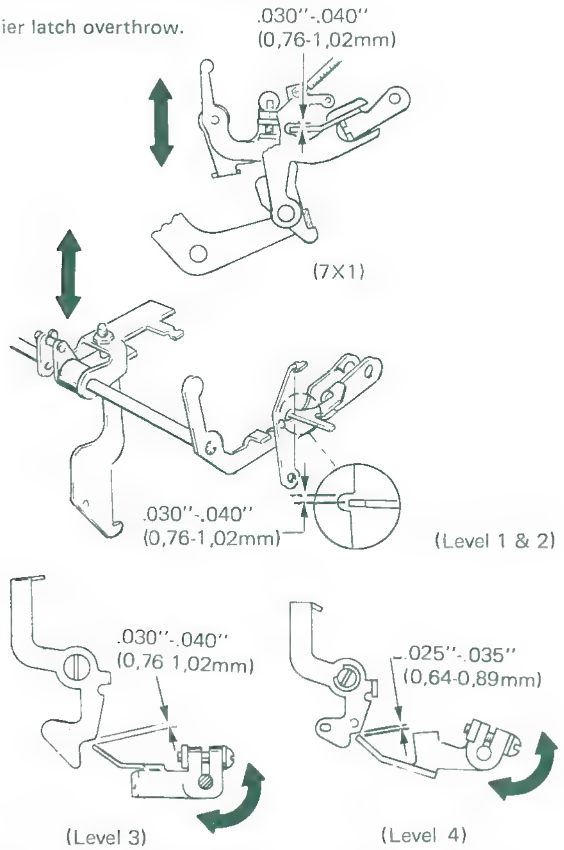
5. Spacebar link.



(RB/S)

6. Latch height .001"-.015" (0,03-0,38mm) clearance between latches and bails with interposers released.

7. Carrier latch overthrow.



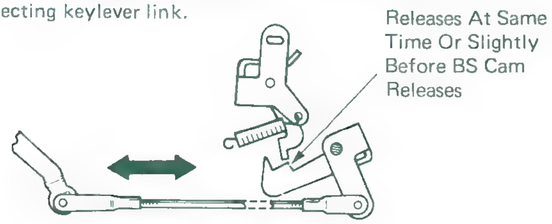
(7X1)

(Level 1 & 2)

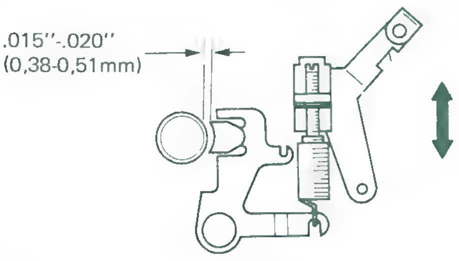
(Level 3)

(Level 4)

8. Correcting keylever link.



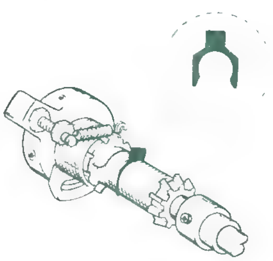
9. Carrier return shoe clearance.



(Level 2)

1 TORQUE LIMITER AND TAB GOVERNOR (10/68)

Simplified Adjustments: Position the carrier return pinion for proper gear engagement with the escapement drum. Insert the .005" (0,13mm) cycle shaft shim (P/N 1280822) between the CR pinion and the torque limiter arbor and push the torque limiter arbor up to the shim. Tighten the torque limiter setscrews. The proper adjustment is now made with a minimum of clearance and no binds. This same procedure can be used for adjustment of the tab governor pinion and collar.



2 TORQUE LIMITER LUBRICATION (10/68)

The torque limiter may be lubricated without disassembly by placing grease on the end of the torque limiter spring in the grooves of the arbor. When this is completed, hold the carrier during a return operation. The spring will attract the grease, providing enough lubrication.

OPERATIONAL CAM FOLLOWER ROLLER – WEAR (CEM 319) (6/76)

Some machines have been shipped with cam follower rollers that prematurely wear.

Note: This CEM supercedes CEM 283.

A replaceable S/B and C/R cam follower roller is available. Removal of the roller and the roller rivets is accomplished with special tools. Parts are listed in the APM.

The recommended replacement procedure is as follows:

Note: Cam follower removal tool must be lubricated to reduce friction. Failure to lubricate tool will result in difficulty turning handle. If handle continues to bind, add washer (P/N 1117394, in parts packet no. 8) between handle and tool body.

1. Remove escapement trip link
2. (C/R) Remove index link
   (S/B) Move machine forward in bottom cover. Insert screwdriver under switch bracket and over cam follower, as shown, to raise cam follower roller (Figure 1).

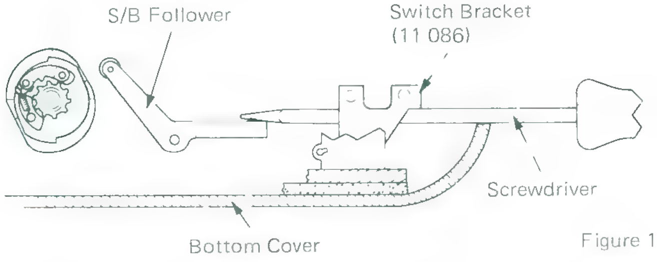


Figure 1

Note: Installation of the removal tool may be difficult. This condition can be lessened by one of the following:

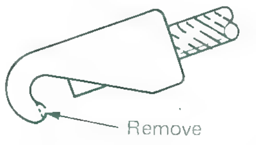


Figure 2

a. If the CE has access to a grinder, remove portion of hook as shown (Figure 2).
b. Tool can be disassembled allowing installation of hook over roller as shown. If this method is used, tighten shaft finger tight against roller at this time.

(Continued On Next Page)

Caution: If shaft is not touching roller, it is possible that the cam follower arm will break, however, tightening shaft too tight against roller makes removal of the roller from the tool difficult, and may result in breakage of the screwdriver slot. If shaft is overtightened, the handle may be unscrewed until threaded portion is flush with slotted end of shaft. This will provide support to ears of shaft while loosening.

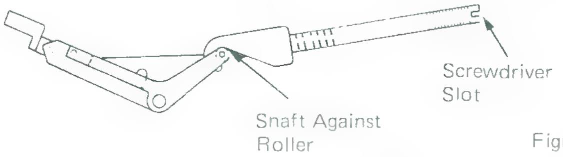


Figure 3

3. With tool installed as shown (Figure 4), ensure shaft is touching roller to lock roller in place. (This may be done with tool assembled, using the screwdriver slot in end of shaft. **Caution:** Do not over-tighten shaft, review step 2B). Secure tool against print shaft and tighten handle until roller snaps out of follower arms.

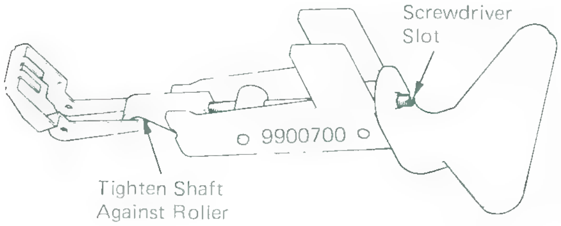


Figure 4

4. If rivet heads remain in arms, install rivet tool on one side of duckbill pliers and punch rivet out. A piece of paper may be placed inside the rivet tool to help hold tool on duck-bills (Figure 5).

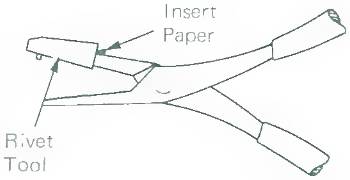


Figure 5

Install replaceable roller as shown (Figure 7).

Important: Lubricate all replaceable parts with No. 10 oil before installation.

5. (C/R) The recommended procedures is as follows: Install sleeve (25-318) inside roller. Apply grease on locking plate (25-315) (Figure 6).

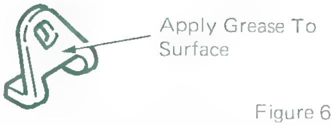


Figure 6

Align flats on sleeve with hole in locking plate and press against roller. While holding roller with scissor clamps, lower complete assembly between follower arms. LH arm should be in slot of locking plate. Install one C-clip on pivot shaft (25-319) and install pivot shaft through complete assembly. Install remaining C-clip (Figure 7).

Note: Roller may also be installed using disassembled tool as shown in Figure 3.

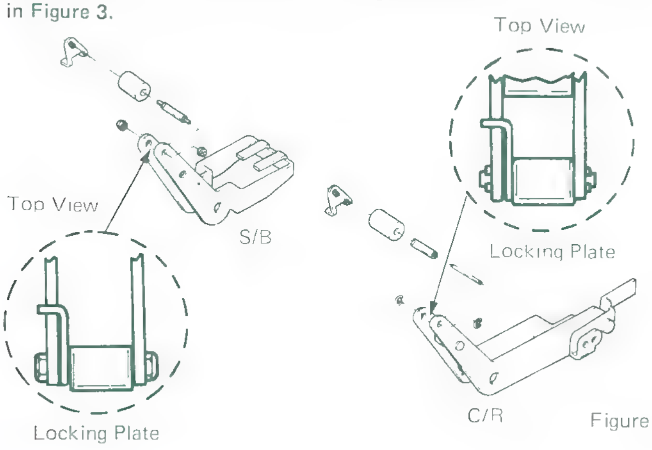


Figure 7

(Continued)

(S/B) The recommended procedure is as follows: Install typebar aligning tool between cam follower arms (Figure 8). Apply grease to locking plate and install over LH follower arm and align holes. Install pivot shaft (25-317) through roller. While holding roller in place between follower arms with scissor clamps or tool as shown in Figure 3, align flats on end of shaft with slot in locking plate and remove aligning tool. Install nuts on shaft (Figure 7). **Caution: Do not over-tighten.**

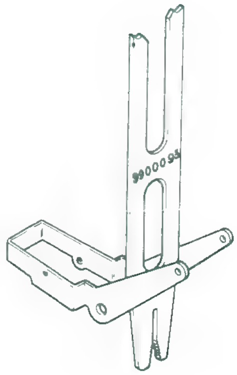


Figure 8

Note: Locking plate must be installed on all cam followers to ensure pivot pin does not rotate, and should be installed on the LH follower arm.

6. (S/B) Replace existing tab cord idler pulley (18-123, 19-17) with smaller pulley to ensure there is no interference between nut (25-320) and pulley.
7. Replace escapement trip link and index link.
8. **Roller pivots must be lubricated.**

1. Check operational interposer restoring bail adjustment (APM FR 133).
2. Check operational latch height adjustments (APM FR 135, 152).
3. (C/R) Check C/R overthrow (APM FR 153).
4. (C/R) Check all index adjustments (APM FR 243-249).
5. Check B/S motion adjustments (APM FR 165 (NRB/S), FR 172 RB/S).
6. Check Escapement trip-link (APM FR 96).

ESTIMATED INSTALLATION TIME .4 Hrs.

Recovery Code
Expired (6-77)

1 LATCH WHEEL – WEARING (CEM 345) (12/77)

If experiencing a repeating spacebar and backspace operation, check the adjustment shown in Figure 1. Insufficient bite of the clutch release arm (25-239) to the clutch wheel (25-44) can cause premature wear. A repeating operational cam may look like escapement failures (skipping or crowding of characters). Check the latching surface on the clutch wheel; if the latch is rounded, the operational cam on the latch ring should be changed.

Check adjustment by manually releasing the latch from the bottom of the machine. Do not check this adjustment by releasing the spacebar as the load of the spacebar interposer will cause an incorrect reading.

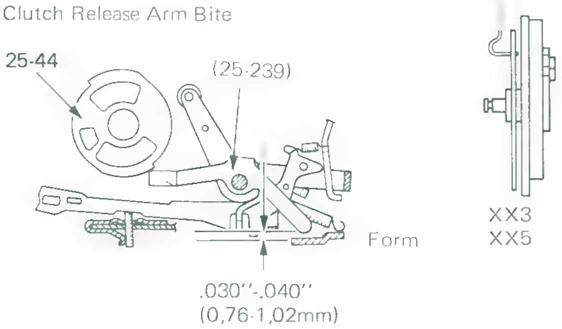


Figure 1

1 RETAINER CLIP (RESTORING BAIL) (CEM 351— (9/77)

When replacing interposer restoring bail (25-216), be sure to reinstall retainer clip (25-217) properly as this is a spring loaded clip to hold the bail tight.

If the clip is installed backwards, there will be lost motion in the restoring bail (Figure 1).

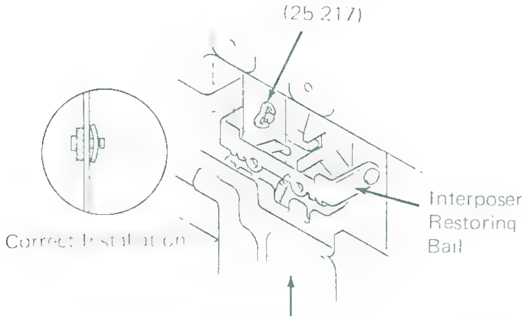
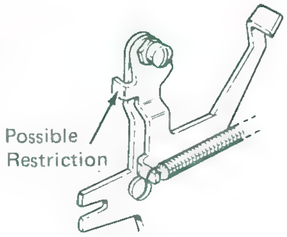


Figure 1

PAPER FEED

2 PLATEN LATCH ADJUSTMENT (1/71)

The platen latch adjustments should be checked when checking index or paper feed adjustments. The latch lug can bind off the latch and allow the platen to move up out of position, giving an uneven writing line and index failures.



3 PLATEN "WALKS" OUT OF LATCHES (1/71)

Platen Bushing Binding (12-22): Binding platen bushings may cause the platen to move out from the platen latches. Clean both the bushings and platen shaft and relubricate.

4 PLATEN DAMAGE (1/71)

If the platen is installed in the "Selectric" Typewriter without first installing the feed rolls and deflector, it is likely that the feed roll support arms will cut the rubber covering on the platen.

Platen damage can be caused by typing on the platen without an element on the machine. The rotate detent can make contact with the platen. This can also cause excessive rotate detent side play.

Internal platen damage can result if undue rotational pressure is applied on the platen knobs.

5 PAPER FEED "A-FRAME" (CEM 191) (1/74)

All "Selectric" and "Selectric" typewriters are being manufactured with a redesigned paper feed assembly. This paper feed uses an "A-frame" for support instead of tie rods.

The feed rolls may be removed from the "A-frame" in the following manner:

Carefully spread the feed roll arm assembly and remove the front feed roll. Pivot the rear feed roll toward the front and remove.

Removing the "A-frame" assembly will allow easy access to rotary backspace, escapement bracket and transport cords.

The "A-frame" is removed in the following way:

1. (SE II) Remove detent release lever and stud.
2. Remove the platen ratchet detent.
3. Remove the index link from the index pawl without changing the adjustment.
4. Remove index pawl overthrow stop.
5. (Dual Pitch) Disconnect half-backspace links, loosen half-backspace stop bracket nut and pivot bracket from under nut.
6. (Dual Pitch) Remove pitch cam cable from switch pitch sector gear.
7. Scribe the position of the multiple copy control detent plate; loosen the screw and pivot the plate from under the screw.
8. Disconnect both anchor springs. These springs connect the paper feed assembly to the power frame.
9. Lift the paper feed assembly at the rear; pull toward the rear of the machine and remove the assembly.

Estimated Removal And Installation Time: .1 hr.

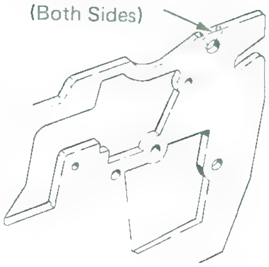
The complete "A-frame" assembly can be installed on all level "Selectric" typewriters. To convert to "A-frame," order the appropriate assembly (22-228) and change B/M (22-229). These contain necessary parts and installation instructions.

For dual pitch machines below approximately S/N 8X3—1081654, 8X5—2095803, order half-backspace parts, 07-20, 61, 62, 63 and 19-57. For machines equipped with pinfeed platen, order bushing (49-115).

(Continued On Next Page)

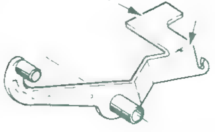
Estimated Conversion Time: .8 hr.

Installation Note: Below approx. S/N 7X1–5768765, 7X3–5184566,7X5–5535678 the power frame has a hole instead of a slot for the multiple copy shaft. To install the paper feed assembly, the multiple copy shaft must be removed and reinstalled in the holes or, the power frame must have material removed as shown (Fig. 1).



(Figure 1)

The part numbers for platen detent assemblies remain the same. Some earlier level detents may have a lug as shown (Fig. 2). In order to use with the "A-frame" paper feed, break off the lug.



(Figure 2)

1 PLATEN REMOVAL – CORRECTING "SELECTRIC" (CEM 210) (7/73)

The platen should only be removed when the carrier is positioned at least 20 spaces from either end. Removing it with the carrier closer to the ends may cause damage to the correcting mechanism.

2 PAPER BAIL (CEM 210) (7/73)

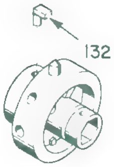
Some paper bail shaft screw holes may be out of line, resulting in paper not being held tightly against the platen.

3 PLATEN CORE KEY – PINFEED PLATEN (1/71)

A new key (49-132) to hold the platen core to the pinwheel.

If uneven line spacing occurs:

1. Remove roll pin from right-hand pinwheel assembly.
2. Install new nylon key in pin-wheel assembly as shown in Fig. 1. The long side must point toward the pins.



(Figure 1)

The key is slightly larger than the hole in the pinwheel. Use a hammer to install it.

3. If the keyway in the platen core is worn, a new core must be installed.

4 PINFEED PLATEN CORES – LEVEL 2 (CEM 105) (6/71)

The Level 2 platen cores are .018" (0,46mm) shorter than Level 1 cores when measured pin-to-pin. The new pinfeed platens have a hex shaft and the old pinfeed platens have a threaded shaft.

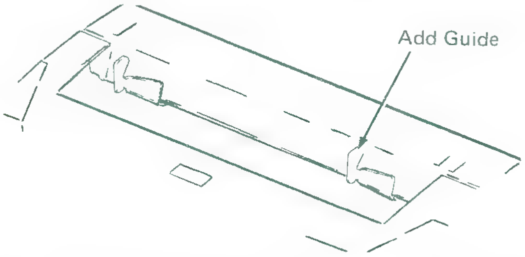
Should the core on an old level pinfeed platen need to be replaced, order a new level core, (49-117), PLUS ONE EACH of the platen shims (49-26). This gives the proper fit pin-to-pin.

5 ENDLESS FORMS (1/71)

On pinfeed platen machines where continuous forms are used, it is recommended that the forms be supplied from a table approximately the same height as the typewriter stand. The additional pull needed to feed the forms from the floor may make indexing critical to adjust.

6 CONTINUOUS FORM – LATERAL CONTROL TIP (10/68)

A second paper guide can be installed for continuous forms application to help control the lateral position of the forms.



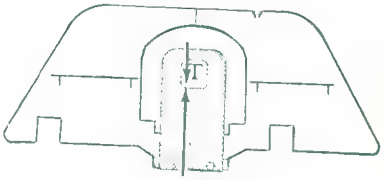
7 PRINT SHIELD – REMOVABLE (CEM 1) (1/74)

A print shield may be used to remove side printing or interference printing on the original (for carbon ribbon machines).

Use B/M 1175842 after ensuring that maladjustments are not causing the side printing condition.

Interference printing may reappear when the shield becomes worn. The shield will last approximately 30 ribbons. (The shield should be inspected on any service call and replaced if necessary to minimize the number of times an operator has to replace the cardholder and shield assembly.)

1. Adjust for normal .010"-.015" (0,25-0,38mm) cardholder-to-platen clearance.
2. Adjust cardholder left or right and up or down for proper registration. A common cardholder for both the 10 and 12 pitch machines is used. This means that there will be 5 spaces between the registration marks for 10 pitch machine and 6 spaces for a 12 pitch machine.
3. On old-style film ribbon mechaisms, adjust the load lever link so the shield is against the platen when the ribbon is being installed.
4. Check for possible interference with the ribbon lift mechanism. When the cardholder is adjusted for proper registration, the shield will be in the correct position.
5. Type an uppercase "T," backspace and type an underscore. The "T" should be in the center and the underscore approximately .020" (0,51mm) from the bottom of the hole (Fig. 1).
6. The shield actuating lever must be toward the front during normal typing operation and the shield must rest against the element. Fold the shield at the bottom if necessary to get this condition.



(Figure 1)

Instruct the operator to push the gray positioning lever to the rear before installing an element. This will prevent the shield from getting under the element. During typing the lever must be toward the keyboard.

When the load lever of the film ribbon mechanism is activated, the shield will automatically be positioned to the rear. The ribbon must be installed in front of the shield.

Show the operator how to remove and install the cardholder. (Have the operator try it.)

Leave the 4 additional cardholders with the operator.

1 PAPER BAIL ARM AND PLATEN KNOB SCREW – LOOSE (CEM 297) (12/77)

Loose paper bail arm screw (22-002) and platen knob screws (12-2) may be secured by applying Locktite sealant (Type E –P/N 605960) on screw threads before tightening. This will allow removal of screws if necessary.

2 UNIVERSAL CARDHOLDER BRACKET (CEM 327) (10/76)

Provide a universal cardholder bracket for "Selectric" and "Selectric" II (non-correcting) typewriters to allow installation of all snap-in cardholders. The bracket and feet are assembled (Fig. 1).

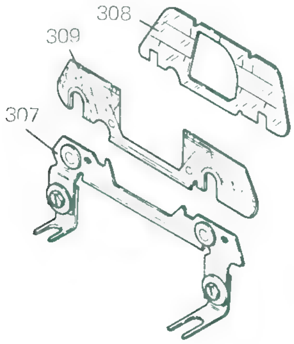


Figure 1

3 FEED ROLLS – MARKING ORIGINAL AND CARBON COPIES (CEM 353) (2/79)

If experiencing feed roll marks on original and/or carbon copies, replace with light gray plastic insert feed rolls (22-286, 287). The feed rolls are resistant to chemical reactions with carbon and copied paper. Also the rubber is softer to reduce carbon marking. If still experiencing carbon marks on copies after replacing feed rolls, the tie rod springs (22-87) may be used on the "A" frame machines.

Adjust springs for 16-20 oz. feed roll tension.

The part numbers will remain the same and are located in the current PN/PL. All old style parts have been scraped.

4 PAPER BAIL ARMS AND SPRINGS – UNIVERSAL (CEM 359) (2/79)

A universal paper bail arm (26-74, 100) for "Selectric" II and correcting "Selectric" typewriters is now available. This change does not affect the 7XX machines.

On some early level machines it may be necessary to use washer (26-210) (Figure 1) on the inside of the left-hand paper bail to remove interference with the platen latch. The washer is available in parts packet No. 8.

The paper bail arm spring (26-209) should be used with all paper bail arms 8XX and 7XX (Figure 1).

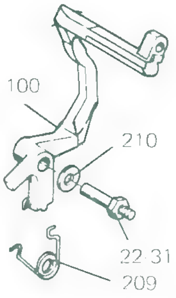
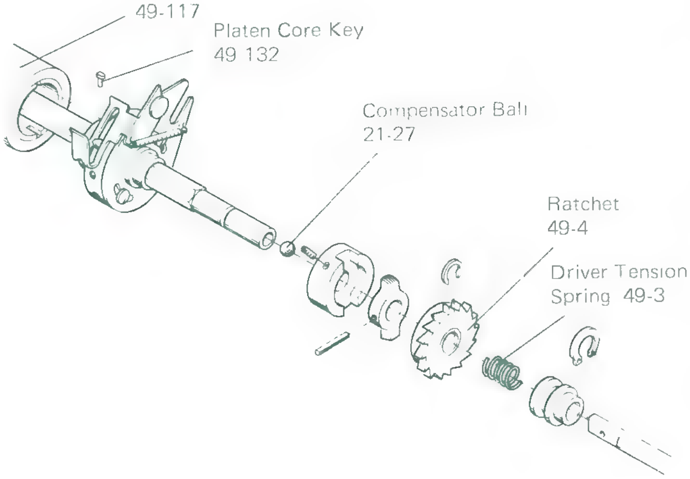


Figure 1

5 PINFEED PLATEN – ERRATIC LINESPACING (CEM 309) (1/76)

Three areas in addition to adjusting the indexing mechanism should be checked when experiencing erratic linespacing.

1. Insufficient driver spring tension (49-3). Check the tension with a spring scale against the left platen knob. It should be 1.5 to 2.5 lbs. just before the driver seats in the ratchet. The tension can be increased by installing a compensator ball (21-27) as illustrated.
2. Some 27 tooth ratchets (49-4), previous to this CEM, may have misaligned serrations. It is recommended the ratchet be changed if erratic linespacing is encountered.
3. Check the platen core key (49-132) for wear and replace the key and core if worn. Metal pinwheels have a replaceable key (P/N 1187957). Black plastic pinwheels have a molded key and replacement of the pinwheel is necessary.



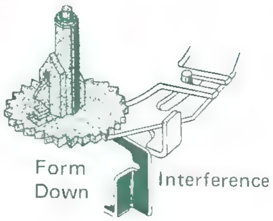
Approximately serial numbers 7X1-0613000-0625000, 8X3-152800-1565000, 8X5-2833000-2902000.

Recovery Code Expired (10-76)

FABRIC RIBBON

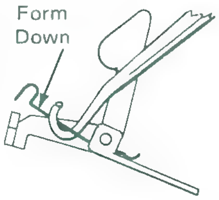
1 REVERSE FAILURE LIFT LEVER (10/68)

Intermittent ribbon reverse problems can be caused by interference between ribbon lift lever and ratchet check lever. This usually happens in the center and high lift positions. Form the ribbon position lever down to remove this condition.



2 RIBBON REVERSE INTERPOSER SPRING TENSION (10/68)

To minimize reverse failures on early level machines, the tension on the ribbon trigger springs must be increased. A quick, reliable way of doing this is to raise the spring with a spring hook as shown. The end can then be formed down.

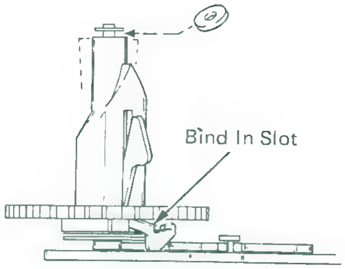


Also, intermittent ribbon reverse failure can sometimes be caused by the reverse interposer spring dragging on the rivet on which the reverse interposer slides. This may be fixed by removing the cut-off burr from the rivet.

Check the molded tenons on the ribbon cartridge to see that no interference exists between the molded tenons and the reverse lever which may cause reversing failures.

3 REVERSE FAILURES – TRIGGER BIND (10/68)

Some reverse failures are due to ribbon assemblies which are not long enough. This allows the reverse trigger to bind in the slot of the ratchet. To fix the problem, install a washer (PN 1175195) as shown.



4 REVERSE FAILURE BRAKE TENSION (10/68)

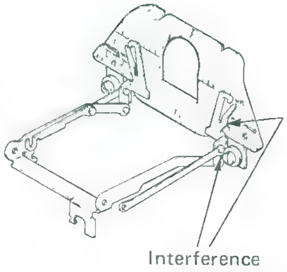
Uneven (light/dark) printing of the characters on a fabric ribbon near either end of the supply spools may indicate incorrect ratchet brake spring tension. These springs should be formed to drag on the ratchets enough to produce a tightly wound ribbon. If either spool winds loosely, the reverse trigger will be allowed to operate at different points along the ribbon toward the end of the ribbon, thus producing the light and dark pattern.

5 RIBBON TRACKING (1/74)

Power-on ribbon tracking can be easily observed on any fabric ribbon machine by placing a piece of correcting-type paper at the front side of the ribbon with the correcting side toward the ribbon. By typing a series of characters at each lift position, a visible, non-damaging indication of tracking results.

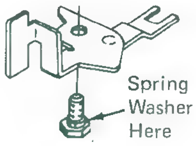
6 FABRIC RIBBON LIFT GUIDE – INTERFERENCE (10/68)

The free flight of the element may be limited due to interference between the lift guide and the card holder. This will usually affect low velocity characters on a stencil application.



7 RIBBON LOAD LEVER – EXCESSIVE VERTICAL MOTION (10/68)

Excessive vertical motion of this part may be unwanted by the operator. This may be corrected by installation of spring washer, P/N 1072477, between the stud and the lever.



8 RATCHET DETENT LEVER – REDESIGNED (10/68)

Ribbon reverse or feed failures may force the lugs of the ratchet detent lever under the ratchet. This will occur only after a reverse or feed failure. To prevent this double failure, the ratchet detent lever has been redesigned. The lugs of the ratchet detent lever have been extended .020" (0,51mm) higher and the detent lever mounting rivet has been modified to reduce end play.

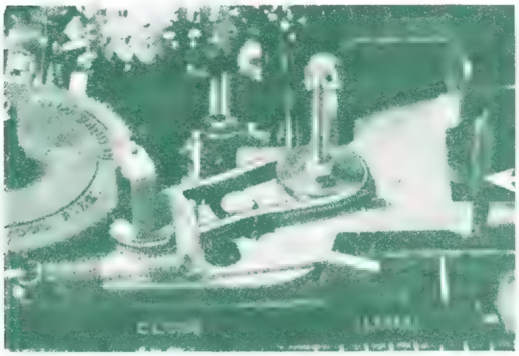
A field fix for this condition is as follows: Form the detent lugs up to ensure that the top of the lug remains at the top of the ratchet when all play is removed in the downward direction. After making this change, recheck adjustment of the ratchet detent lever lugs.

RIBBON – FILM

1 FILM RIBBON – FOLDING & TRACKING PROBLEMS (10/68)

When experiencing tracking problems with film ribbon "Selectrics" due to folding of the ribbon, check the following:

1. **Ribbon Plate Adjustment Tip:** When all adjustments are correct and the film ribbon fails to track properly, folds at the right guide, or contacts the take-up spool, the right front guide may need adjusting. Forming to the right will lower the ribbon; left, will raise it. Do not form too far to the left so that the lug contacts the spool.



2. **Lift Guide:** Film ribbon folding can be caused by a bending action of the ribbon lift guide assembly as a result of interference between the card holder mounting screw and the lift guide.
3. Ribbon tracking and folding can be affected by a dirty and sticking shock spring sleeve. Keep the sleeve and wire clean.
4. **Shock Spring:** Ribbon folding may be fixed by reducing the tension of the shock load extension spring. **Caution:** The tension of the spring must be enough to positively detent the shock load spring into the supply spool ratchet teeth or uneven feed will result. Also, be sure the shock spring angle is correct.

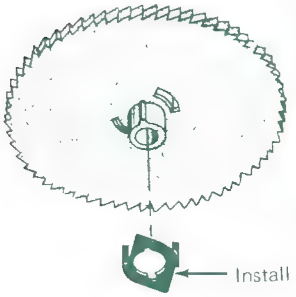
2 SHOCK SPRING ADJUSTMENT TIP 10/68

The small formed part of the shock spring that extends to the left from under the mounting screw head can be used for holding the spring in the adjusted position while tightening the screw.

The small loop on the end of the shock spring has been turned so the loop faces to the left. This was done to prevent the ribbon from slipping off when installing the ribbon.

3 RIBBON FEED FAILURE (10/68)

The locking rib on the film ribbon supply spool may wear on machines used on automatic operation, causing ribbon feed failure. A clip (P/N 1173585) may be installed to correct this condition.



4 FILM RIBBON CHANGES (10/68)

Fabric to film ribbon changes are recommended only for machines equipped with stick-shift and dual impression.

5 SPRING, LIFT LINK (FABRIC TO FILM RIBBON CHANGE) (10/68)

Disconnect the lift link when changing a fabric ribbon to a film ribbon machine. Lift adjustments cannot be made if this spring is connected. Also, an overlapping pattern will result if this spring is connected.

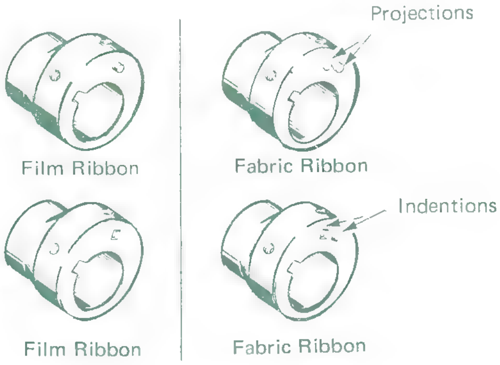
6 COMPATIBILITY OF FILM AND FABRIC RIBBON CAM FOLLOWERS (10/68)

Film ribbon machines now use the same ribbon lift cam follower (P/N 1124663) as fabric ribbon machines. When installing B/M 1272420, Fabric to Film Ribbon Change, it will be unnecessary to change the follower as instructed in the installation instructions.

7 RIBBON FEED AND DETENT CAMS – IDENTIFICATION (1/71)

The fabric ribbon feed and detent cam can be identified by either two square indentions or two rounded projections.

The film ribbon feed and detent cam is identified by one square indention or one round projection.



RIBBON SELECTIVE

1 PRINT QUALITY – TECH III (CEM 143) (2/72)

Some print quality problems have been caused by oil on the ribbon. Remember this possibility. If necessary, clean excessive oil from the carrier and the ribbon mechanism. The assembly line is now using less oil in these areas.

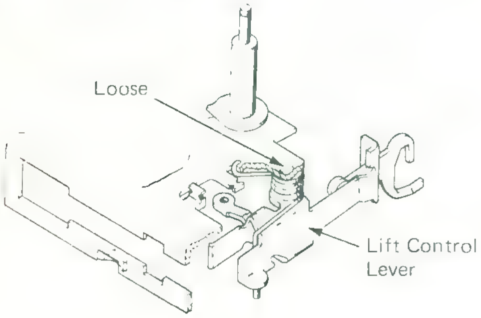
2 RIBBON LIFT FAILURES– SELECTIVE RIBBON (CEM 125) (10/71)

Intermittent ribbon lift failures can be caused by improper print shaft timing.

If experiencing this problem, ensure the print shaft is timed within specification.

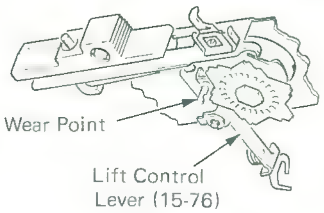
3 LIFT CONTROL LEVER MOUNTING POST – LOOSE (CEM 225) (10/73)

If experiencing intermittent ribbon lift failures with the selective ribbon system, check the mounting post of the lift control lever (15-76). If loose, replace ribbon plate assembly (15-151), P/N 1206661, or (26-106) P/N 1206210.



4 LIFT CONTROL LEVER STUD – WEAR (CEM 294) (7/75)

If experiencing intermittent ribbon lift failures with the selective ribbon system, check the lift control lever stud (15-76) for wear. (Stud can be easily observed with machine in stencil position.) Replace lift control lever, P/N 1206583, if necessary.



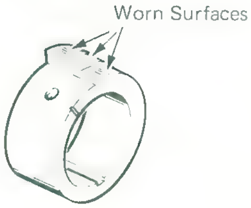
(Bottom View)

Recovery Code
Expired 7-15-76

5 RIBBON LIFT AND TRACKING FAILURES (CEM 275) (12/74)

Some "Selectric" II typewriters may have reached the field with a soft ribbon lift cam (15-17), P/N 1206694, (26-56), P/N 1206058.

When experiencing ribbon lift or tracking failures, check the lobes of the cam for excessive wear. Replace the cam if necessary.



The failure is more visible when using film or correctable film ribbons as the characters overlap between lift positions, leaving voids on the paper.

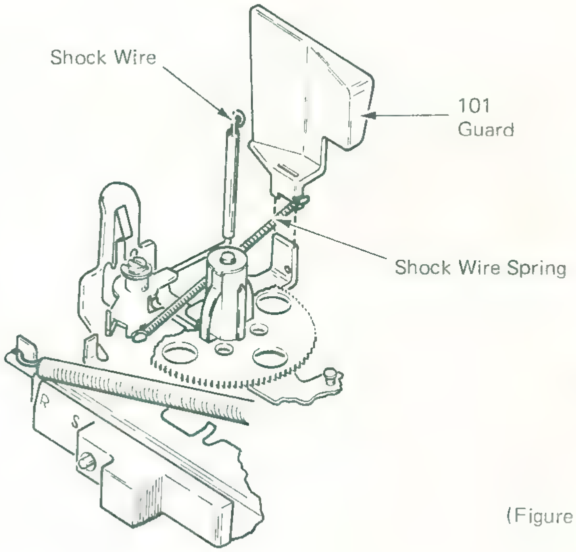
See frame 290 in "Selectric" APM for proper alignment of cam to print sleeve flat.

Recovery Code
Expired 12-1-75

6 GUARD – SELECTIVE RIBBON (CEM 214) (8/23)

Tech III and film ribbons will break when not properly installed around shock wire.

To prevent operator from incorrectly installing Tech III or film ribbon on selective ribbon machines, install guard as shown in Figure 1. Hold ribbon plate with finger when pressing down guard. Hook shock wire spring to lug on guard.



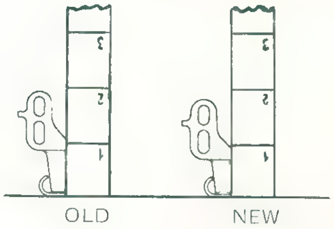
(Figure 1)

Recovery Code
Expired 8-21-74

7 SELECTIVE RIBBON SPREAD PLATE – REDESIGN (CEM 299) (12/75)

The slots in the spread plate have been made longer to make the adjustments easier.

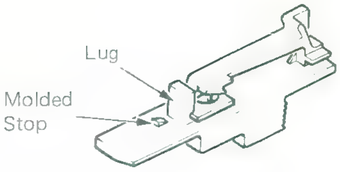
Replace spread plate (15-22). This plate is stronger and has a shorter lever extension.



It is necessary to replace adjusting plate (15-24) on machines below 8X3-1070370 and 8X5-2085674.

1 STENCIL LEVER — REDESIGNED — SELECTIVE RIBBON (CEM 254) (2/78)

Stencil lever (15-80) has been redesigned with a molded stop to prevent the lever from popping out of the ribbon plate when pushed too far left.



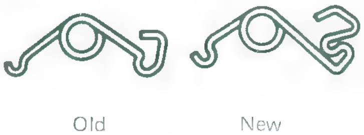
To install redesigned stencil lever:

1. Remove C-clip (15-21) from lift cam follower (15-24).
2. Move stencil lever (15-80) to left and disengage from ribbon plate (15-86).
3. Remove spring (15-79) from old stencil lever and install on new stencil lever. Do not overstretch spring.
4. Insert screwdriver through opening in ribbon plate (15-86) and move lift control lever (15-76) to left to reinstall stencil lever.
5. Ensure lift control lever is engaged with lift cam follower roller (15-20) and reinstall clip (15-21).

Plant installed above approx. 8X3 1423000, 8X5 — 2631000.

2 LOAD LEVER SPRING — REDESIGNED (CEM 269) (2/78)

Under certain conditions, it is possible for the load lever spring to pop off. New level will eliminate this condition.



Replace with new level spring (26-18).

This change cannot be installed on machines manufactured prior to 8X3 — 1028900, 8X5 — 203400 unless the old level ribbon plate asm. is replaced with the new level (26-106).

Plant installed above approx. 8X3-1345000, 8X5-249400.

Recovery Code Expired (9-75)

3 SELECTIVE RIBBON — FIELD INSTALL (CEM 320) (9/76)

Provide a carrier buffer to aid in stabilizing the carrier when excessive play exists between the print sleeve and print shaft.

SYMPTOM: Problems related to excessive carrier motion left-to-right, i.e., incomplete lift off, escapement failures, character alignment, print quality, overbank, etc.

The addition of the buffers should be done only after all related adjustments are checked and should not be installed instead of replacing worn parts.

Install carrier buffer (02-015) on right side of carrier and adjust (Figure 1).

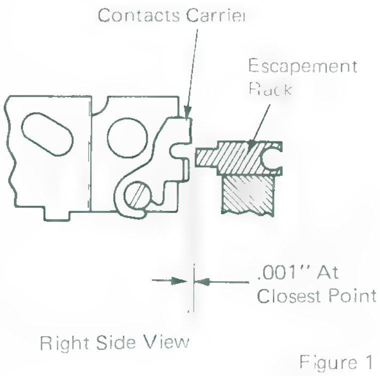


Figure 1

Adjust buffer to clear escapement rail by .001" at closest point.

4 WOBBLER SPRING — REMOVED (CEM 360) (2/78)

The wobbler spring (15-26) has been removed from production machines. The ribbon lift arm spring (15-78) supplies restoring motion to the wobbler. It is not necessary to install the spring on new machines or to replace the spring when working with this mechanism on machines presently in the field (Fig. 1).

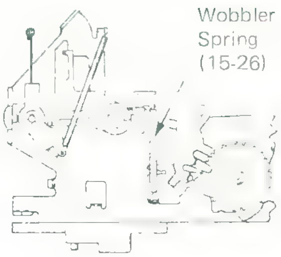


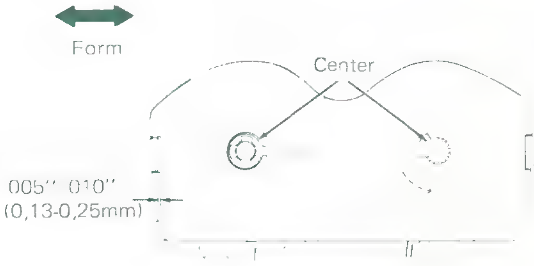
Figure 1

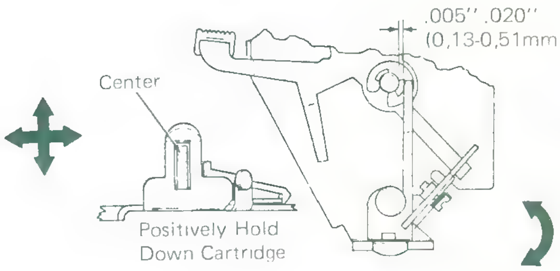
5 FLAKING AND/OR EXCESSIVE RIBBON DUST (CEM 375) (11/78)

Checks and adjustments to minimize flaking and excessive ribbon dust when using correctable film/carbon film ribbon.

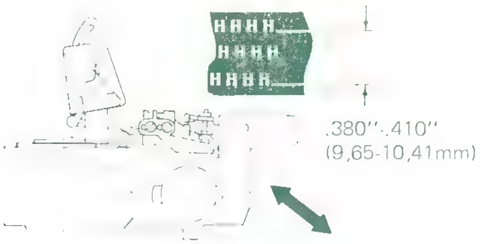
Make the following ribbon mechanism adjustments to minimize flaking and buildup of ribbon dust.

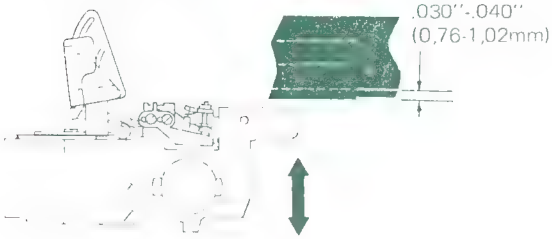
1. Clean Carrier And Ribbon Area — All carbon buildup must be removed from lift guides. Lubricate lift guides with light film of no. 23 grease on sliding surfaces.
   Note: An excessive carbon dust buildup in the carrier area can identify a problem. Inspect the parts and adjustments around the carbon buildup. This must be cleaned from the machine to avoid transferring to the paper.
2. Cartridge Guides (15-86) And Cartridge Retaining Springs (15-59) — Check for proper centering and positive latching of cartridge.



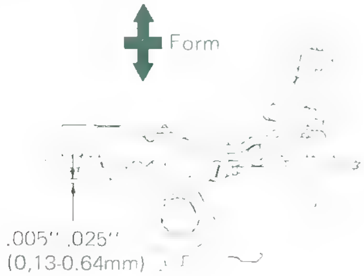


3. Spread Adjusting Plate (15-22) And Lift Height (15-30) – Adjust ribbon spread to low side of spec. .380" (9,65mm) and lift to high side of spec. .040" (1,02mm). This provides minimum lift motion required to ensure each character strikes an unused section of the ribbon.

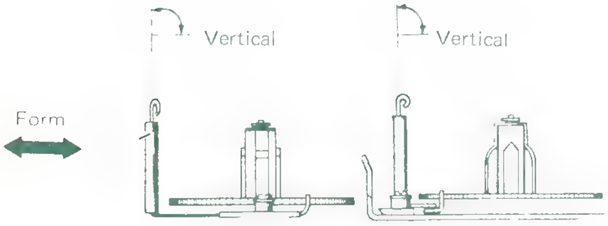




4. Lift Arm Lower Stop (15-2) – Adjust to **high** side of spec. .025" (0,64mm). **Note:** Be sure lowest character does not strike ribbon when reached in stencil position.

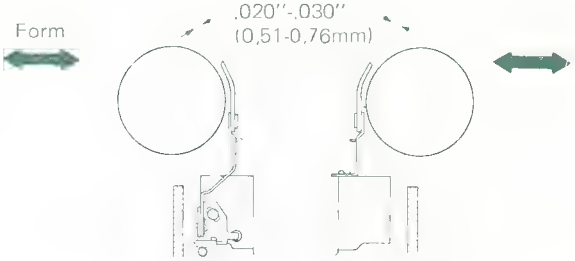


5. Shock Wire (15-83) – The nominal adjustment of the shock wire is vertical. The ribbon should track in the center of the guides during typing. **Form the shock wire slightly to correct any tendency to track away from center.**



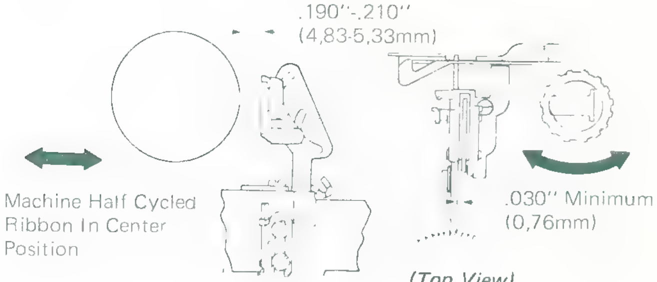
(Left Side View) *(Front View)*

6. Cardholder Bracket (26-42) – Adjust clearance to **low** side of spec. .020" (0,51mm). Do NOT allow the cardholder to touch the paper when using the customer's thickest application. Instruct the operator to use the copy control lever if necessary.



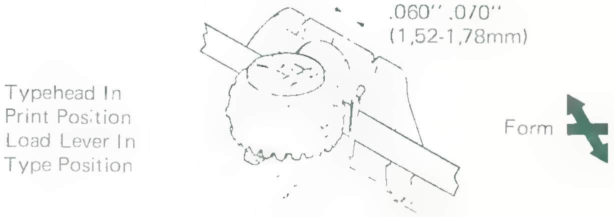
(Left Side View) *(Right Side View)*

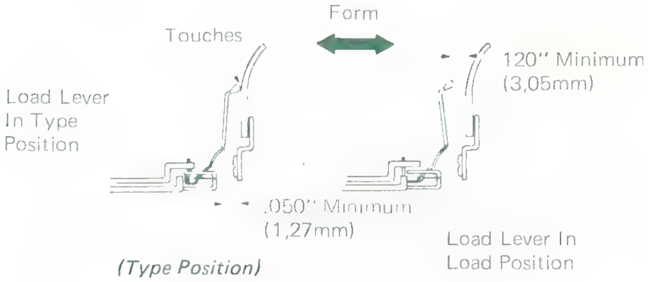
7. Left-Hand Ribbon Lift Guide (26-72) – Adjust so inked side of ribbon does not come in contact with guide or other machine parts. **Note:** Ribbon guides must be parallel. This is a refinement of the ribbon lift guide adjustment.



(Left Side View) *(Top View)*

8. Separator Wire Left-To-Right (26-9) – Adjust separator wire to high side of spec. .070" (1,78mm). Check with typing element held against platen to ensure **least possible** contact of ribbon with separator wire during typing.





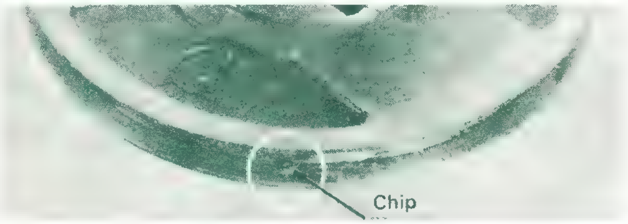
(Type Position)

SELECTION

1 ROTATE TAPE BREAKAGE (10/68)

The following are helpful diagnostic aids:

1. Tape off the tape guide – If a broken tape appears to shine at the break area and there are wear marks or shine marks on the inside of the trunnion, most likely the tape broke because it was not properly installed over the tape guide.
2. Malselection or popping latches – Malselection of some kind will almost always occur before the tape breaks. In other words, a warning signal of either bad alignment or malselection will occur before tape breakage.
3. Foreign material or chips in the rotate pulley – This can be recognized by inspecting the short end of the tape which will measure very close to 5-3/4" (146,05mm). It will have a very clean break and will show no signs of wear marks. The material can be very small.
4. Interlock failure or excessive pull on the tape – A tape that is broken due to excessive tension will tend to curl at the broken area.
5. Off pulley or kinked – Such tapes can usually be identified because they will either be wound around the pulley or arm, or be damaged from kinks or bends.
6. Foreign material in rotate pulley – If a rotate tape is broken approximately 5"-6" (127,0-152,4mm) from the "T" end, a piece of foreign material in the rotate pulley is the most probable cause and the pulley must be cleaned thoroughly with IBM cleaning fluid or replaced.



2 ROTATE PULLEY – TAPE ALIGNER LIFTING OUT OF PULLEY (CEM 117) (9/71)

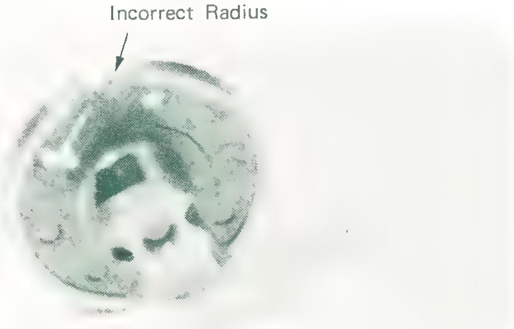
Malselection is possible if the T-end of the tape anchor rises and slips to the rear of the T-slot in the pulley. It is also possible that the tape anchor may come completely out of the pulley.

Replace the pulley.

Recovery Code
Expired 10-1-72

3 ROTATE TAPE BREAKAGE – BAD ROTATE PULLEY (1/71)

Due to a defect in the radius of the rotate pulley on some machines, rotate tapes may break within 1/4" (6,35mm) of the "T." On machines where this occurs, replace the pulley.



4 MACHINE CHECK WHEN TAPES ARE FOUND BROKEN (10/68)

Rotate Tape:

1. Rotate detent clearance (is detent actuating lever roller on).
2. Gear train backlash, tight bond between gears and their hubs.
3. Print shaft timing.
4. Shift interlock adjustments.
5. Shift arm moving out in straight line; not parallel to carrier.
6. Rotate arm not parallel to carrier.
7. Defective rotate arm and shift arm pulley.
8. Any bind that affects free rotation of the element.
9. Tape guide worn, loose, or missing, or adjusted so tape engages leading edge or trailing edge.
10. Burrs on any area the tape travels.
11. Negative latch clearance not enough.
12. Latch links adjusted too long/too short.
13. Latches slip from bail during operation.
14. Latch angle, parts quality.
15. Foreign material blocking the movement of the tape.
16. Interference between tilt and rotate pulleys.
17. Latch bail shaft worn (RH), loose or shifting, not parallel.
18. Burr on rotate pulley.
19. Inteference from:
    a. Selector latch spring/latch.
    b. Rotate eccentric stud/paper bail spring.
    c. Rotate arm/damper spring.
    d. C/R cord/rotate spring.
20. Binding, sticking, broken rotate spring.
21. Binding tape element (tilt ring spacer, back-up plate).
22. Shift arm/cord tension, pulley bracket.

Tilt Tape:

1. Detent to tilt ring clearance.
2. Burrs on the tilt pulley (where tape comes off pulley).
3. Any bind that affects free tilting of tile ring.
4. Foreign material in sector gears.
5. Print shaft timing (affects rotate mechanism more).
6. Tilt pulley spring off or broken.

5 ROTATE TAPE "T" REMOVAL (1/71)

You may find the 224 tweezers helpful to remove the rotate tape "T" from the rotate pulley. These tweezers are also helpful when handling other small parts.

6 ROTATE TAPE REPLACEMENT (10/68)

The following procedure can be used for easy installation of the rotate tape:

1. Half-cycle the machine with the type element on.
2. If a carbon ribbon machine, remove rocker shield.
3. Manually withdraw the rotate detent and use the type element to wind the rotate spring approximately 3-1/2 turns or until the slot for the tape is accessible at near 3-1/2 turns.
4. Allow the rotate detent to reenter. It will hold the position of the head and rotate pulley.
5. Insert the tape anchor into the pulley and thread the eye end through the rotate arm, shift arm, and on to the anchor in the right of the carrier.
6. Allow the shift arm to drop down and take up slack in the tape.
7. Hold the type element and turn the print shaft to remove the detents. Control the type element to allow the rotate spring to slowly wind the tape as you guide it correctly around each of its pulleys.
8. Half-cycle the machine to a lowercase "m" and check for proper rotate spring tension. Check homing and other adjustments as necessary.

1 TILT TAPE REPLACEMENT (10/68)

Replacement of the tilt tape is made easier if the following procedure is used.

1. Half-cycle the letter Z.
2. Manually withdraw the detent lever.
3. Rotate the type element counterclockwise one or two teeth, more it to a three tilt position, and allow the detent lever to bottom in the tooth.

The only reliable way is to hand cycle using the cycle wheel.

2 TAPE INSTALLATION (PRE-GEARLESS TILT) (10/68)

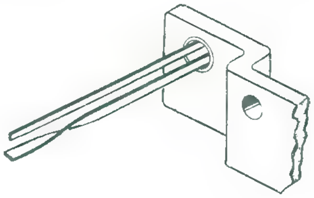
When installing the rotate tape (mechanically crimped), difficulty may be experienced when feeding the "T" end of the tape between the rocker and the tilt pulley. To work around this problem, a small amount of metal may be filed off the "T" anchor to provide more clearance. The eyelet end of the tape may also be threaded through the carrier and the tape pulled through, stopping the need for working the "T" around the pulleys.

3 7X5 ROTATE TAPE CAN BE USED ON 7X1, 7X3 (10/68)

The Model 7X5 rotate tape can be used on the Model 7X1 and 7X3 if necessary. When it is used, it requires readjusting the homing, rotate arm motion, rotate arm eccentric stud and shift motion.

4 ROTATE TAPE INSTALLATION (10/68)

Rotate tapes should be installed so that when the rocker is in print position, the twist in the tape is at a maximum. The top of the tape should be to the front when coming out of the rocker shaft.



5 FINE TIMING ADJUSTMENT (10/68)

The following is the easiest, fastest procedure for adjusting fine timing on "Selectric" typewriters (normal time, 60 seconds).

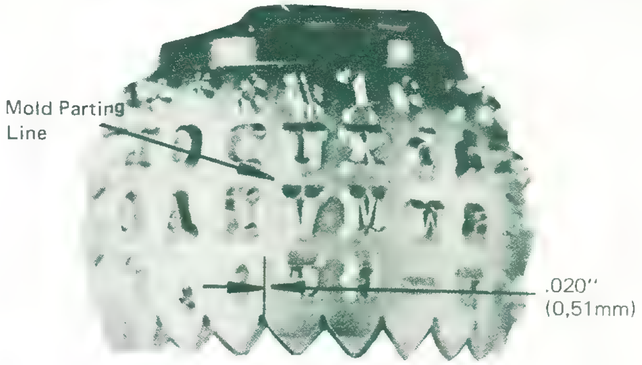
1. Loosen print shaft gear.
2. Hand cycle the letter M until check pawl latches at half-cycle position.
3. Manually rotate the print shaft, observe rotate detent entering and beginning to be removed. Stop rotation where the rotate detent is removed halfway from slope of tooth skirt.
4. Continue hand cycling operation until the type element begins to rotate.
5. Tighten the print shaft gear.

A burred print shaft may cause this procedure to fail. If previous fine timing adjustments have scored or burred the print shaft, remove the print shaft gear and rotate it one tooth in either direction to get to a good surface of the print shaft.

CAUTION: Maintain .002"-.005" (0,05-0,13mm) print shaft end play.

6 TYPEHEAD HOMING (10/68)

When adjusting fine homing of the type element, the mold parting line on the element can be used as a gauge of .020" (0,51mm). Although it is recognized that the parting line does not come into the correct tooth in all cases (i.e., the "M"), the line can be used as a reference to gauge .020" (0,51mm) motion when detenting in most teeth.



7 TIMING ADJUSTMENTS (10/68)

Some customer engineers may be checking detent entry and withdrawal by hand cycling with the print shaft. This procedure (because of gear backlash, etc.) will result in an incorrect reading and should be discontinued.

8 TIMING PROBLEMS (10/68)

When experiencing repeated malselection, broken tapes, escapement and uneven impression, check for a tight bond between metal hubs and their nylon bodies. Also, slippage between parts can throw machines out of time very slightly until a failure occurs.

Mark the hub and gear, then run the machine and recheck the marks for alignment.

9 TILT DETENT ENTRY ADJUSTMENT (10/68)

The tilt detent entry may be adjusted without cover removal by removing the platen and using a 5/16" spinner wrench to loosen the locking nut. Then the adjusting screw may be turned with a springhook or longnose pliers.

10 TILT PULLEY SPRING SERVICEABILITY TIP (10/68)

When the tilt pulley spring is disconnected from the tilt pulley, it may be hooked onto the detent actuating lever. This will prevent the left end of the spring from coming unhooked.

11 LH TILT PULLEY STUD WEAR (10/68)

In those cases where tilt adjustments have changed, or where tilt tapes have broken, check the LH tilt pulley stud for excessive wear on the barrel-shaped part. An incorrect finish was applied to some of these studs which may cause excessive wear. Replace if necessary.

1 DIFFERENTIAL BRACKET ASSEMBLY – LOOSE (1/74)

When differences in band width cannot be corrected through normal adjustment, look for a loose or broken differential assembly mounting stud. A loose nut can result in intermittent malselection and tape breakage.

2 NEGATIVE 5 LATCH ADJUSTMENT (10/68)

If the negative latch clearance is readjusted, be sure to check the overlap of the latch on the head of the stop screw. The head of the stop screw may be out-of-round and turning the screw may change the overlap.

3 ROTATE LINK ADJUSTMENT (1/74)

After adjusting the rotate link and tightening the locknuts, ensure that there are no binds at the rotate link pivot points. This may be checked by moving the link front-to-rear and observing some link motion on the pivot studs. This will ensure that the flat ends of the rotate link are parallel to the flat ends of the rotate arm and rotate bellcrank.

4 POPPING SELECTOR LATCHES (10/68)

Popping latches can be caused by:

1. Selector latch links too short.
2. Selector latch springs binding on latches.
3. Selector latches not vertical.
4. Excessive lost motion in the selector bails.
5. Selector latch links too long.
6. Angle too large in bail plate hook.

The above adjustments have caused popping latches in the past and must be checked for proper adjustment.

Before replacing a popping tilt or rotate latch assembly, try cleaning the pivot points with cleaning fluid and relubricating.

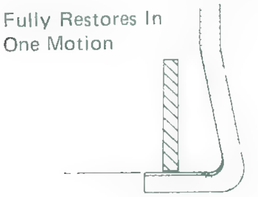
Also clean a replacement assembly before installing. Foreigh material has been found on some of these assemblies.

Selector latches manufactured with too large an angle in the formed area which hooks under the bail plate may cause intermittent latch popping, which could result in malselection, a broken tape, or compensator roller drop.

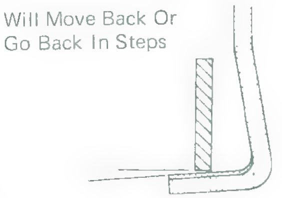
It is very hard to visually detect a bad latch by looking at the angle. A suggested way for locating the bad latch is as follows:

1. With the power off, select the –5 rotate, "0" tilt character ([), and with the turning wheel, run the cycle through by hand until the cycle clutch slips. This will place all the latches against the bail plate ready to restore under the plate.
2. With the machine on its back, again select the –5 rotate, 0 tilt character ([). Very slowly start the next cycle by hand. The selector latches may now be observed restoring under the bail before they begin the next cycle. The following should be observed as the latches restore.

a. A good latch will fully restore in one motion.
b. A bad latch will move slowly back under the bail. It may take two or more steps to fully restore, depending on how slowly the machine is cycled. This indicates that the working face of the latch is angled away from the bottom of the bail plate. If such a condition exists, the bad linkage assembly must be replaced.



Good Latch



Bad Latch

5 REPLACING BROKEN SELECTOR LATCH LINKS (10/68)

A new way of replacing broken selector latch links has been developed and may save time. The new procedure is:

1. Remove the clevis from the selector latch link.
2. Push the link through the square hole in the power frame, from the rear, and through the hole in the selector latch.
3. Install the clevis and attach it to the selector interposer.

This procedure is recommended in place of the procedure which requires removal of the motor.

6 CYCLE CLUTCH PULLEY REPLACEMENT (10/68)

1. Position the carrier to the right.
2. Remove the cycle clutch latch by loosening the top screw and removing the bottom screw. When replacing, use Hooverometer head set on the no. 3 scribe line.
3. Remove the rotate link.
4. Remove the cycle clutch check latch and spring.
5. Disconnect the latch bail spring, pull out latches, drop bail down.
6. Remove two screws and stud holding cam shaft bearing plate and remove.

It may be necessary on some machines to remove the compensator from its mounting bracket. If so, follow steps 7 and 8.

7. Loosen print shaft gear, rotate head counterclockwise to loosen tape and rotate print shaft to detent head.
8. Remove compensator mounting shaft.
9. Work out cam shaft (clean, lubricate and/or replace the clutch spring).
10. Remove the balance arm stud.
11. Remove the rotate bellcrank (if the bellcrank is not countersunk on the back side, countersink or replace).
12. Remove belt.
13. Remove pulley.

Replace in reverse order and check the following:

1. Cam shift end play.
2. Gear backlash.
3. Balance arm.
4. Filter shaft timing.
5. Escapement cam and spacebar cam timing.
6. Shift interlock cam.
7. Print shaft timing.
8. Homing.
9. Belt tension.

7 CYCLE CLUTCH SLIPPAGE (10/68)

Slow keyboard operation can be caused by the cycle clutch spring slipping or the sleeve binding. This condition may be noticed during repeat underscoring. The following area should be checked if this occurs:

1. Excessive cycle shaft end play – End play should be .002"-.006" (0,05-0,15mm).
2. Oil on spring – the proper lubrication for the spring is IBM no. 23 grease. Any oil on the spring will allow slippage; the spring must be removed and completely cleaned with IBM cleaning fluid. Care should be taken to remove all oil from the cycle shaft reservoir area and the cycle pulley hub also. The clutch spring should be relubricated thoroughly with IBM no. 23 grease.
3. Incorrect adjustment of cycle clutch spring.
    a. Opening the spring too soon will cause slippage.
    b. The cycle clutch spring should be adjusted left or right to maintain .005" (0,13mm) clearance between the spring and pulley hub. Excessive clearance will not allow enough engagement of the hub, causing slippage. Too little clearance will cause the spring to bind against the pulley hub and overload the clutch release train, causing sluggish keyboard reaction as well as noisy idling.

c. The cycle clutch collar should be adjusted left or right to allow a minimum of .008" (0,20mm) end play of the clutch sleeve. Too little play of the sleeve can result in wrong readings of the cycle shaft end play (where the sleeve play substitutes for the shaft play) and a direct mechanical drive connection between cycle pulley and shaft. This latter condition will prevent complete closing of the cycle spring and result in slippage.

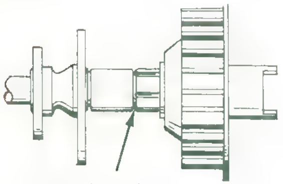
1 CYCLE CLUTCH ADJUSTMENT (10/68)

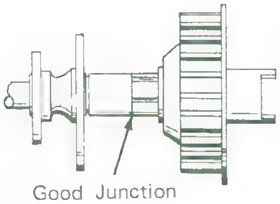
1. Leave the right-hand dust shield in place while performing the power-on adjustment. This will remove the danger of the bristol wrench being thrown out of the machine due to its coming into contact with the torque limiter hub. Rotation of the cycle clutch pulley and drive belt is not a hazard as there are no exposed projections which could throw the bristo wrench out of the machine.
2. Modify the shift stop packing grommet (P/N 7340540 or 7340541) by removing a small part of material from each side. The Hooverometer can be inserted into the cycle clutch latch link to prevent accidental cycling of the machine while performing the power-on adjustment of the cycle clutch.
3. Turn machine on, position the cycle clutch collar screw up, then position the carrier into the right-hand margin to prevent cycling of the cycle shaft.
4. Loosen cycle clutch clamp screw and advance print shaft (top to rear).
   CAUTION: Do not release the cycle clutch with the bristol wrench in the clamp screw.
5. At this time, check the lateral position of the cycle clutch spring. Expand cycle clutch spring by pushing the left-hand side of the spring with a springhook. The lateral position of the spring can be changed by pushing left or right for proper adjustment with the cycle pulley.
6. Rotate the print shaft a complete cycle (top to rear) until the cycle shaft pawl drops in. Back the cycle shaft up against the check pawl.
7. Position the overthrow stop for .007"-.015" (0,18-0,38mm) and tighten the clamp screw. This will give approximately 1/2 tooth of motion to "unwrap" the spring in its rest position. Observe this motion at the print shaft gear.
   This procedure will also apply to the former-style cycle clutch if the two overthrow stop screws are loosened first.

2 CYCLE CLUTCH SPRING WEAR (10/68)

Machines which have slow keyboard action, uneven impression and/or other symptoms of cycle clutch spring wear may begin to appear as early as two to six months after installation. Before replacing the cycle clutch spring, be sure to check the condition of the edge of the cycle pulley arbor. A rounded edge (see drawing) will give the same results as excessive shaft end play — even end play may be within tolerance .002"-.006" (0,05-0,15mm).

When a rounded cycle pulley arbor is found, it will be necessary to replace the pulley as well as the spring for a lasting correction. A rounded edge is easily found by reinserting the cycle shaft without the clutch spring into the machine and observing both arbors where they meet.


Bad Junction


Good Junction

3 CYCLE CLUTCH – EXTRA CYCLES (CEM 311) (9/76)

If experiencing extra cycles, check that the cycle clutch latch shock absorber (21-526) has not slipped from between the latch (21-524) and guide assembly (21-530). Clean excessive grease from shock absorber if necessary.

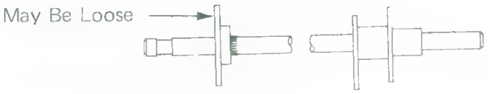
4 CYCLE CLUTCH RESTORING ADJUSTMENT (10/68)

An easy way of adjusting the restoring cam roller is as follows:

1. Loosen the restoring cam roller nut and allow the roller to drop free.
2. Hand cycle the machine until the roller is on the high point of the cam.
3. Place the pusher end of a large springhook between the cycle clutch latch pawl and the keeper. (Insert the springhook through the hole in the right-hand side of the keyboard and over the switch leads to hold it in place.)
4. Place the machine on its feet and hold the roller firmly against the cam while tightening the locking nut.
5. Remove the springhook and check for the proper clearance of .020"-.025" (0,51-0,64mm) between the latch pawl and the keeper, on the cam lobe providing the smaller clearance.

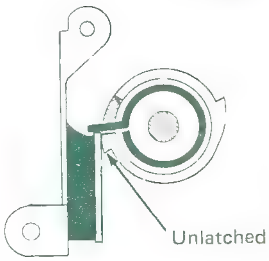
5 CYCLE SHAFT – LOOSE CAMS (CEM 211) (7/73)

Some "Selectric" typewriters have reached the field with loose cams on the cycle clutch shaft. When experiencing malselection problems, check to see that the cams are right and in the proper position.



6 CYCLE CLUTCH ADJUSTMENT TIPS (10/68)

When installing the modified cycle clutch assembly, be sure to unlatch the cycle clutch when adjusting for proper overthrow. Failure to unlatch the cycle clutch will allow rotational movement of the cycle clutch spring when the clamp is loosened. This will cause the drive position to change.



CAUTION: When installing the modified cycle clutch spring, be sure the longest extension of the spring is to the left. If the spring is installed incorrectly, it is possible for the extension to hang up on the cycle clutch latch, keeping the cycle clutch from unlatching.

7 UPPER IDLER GEAR BACKLASH ADJUSTMENT – 30 SECONDS (10/68)

1. Loosen the upper idler gear stud and print shaft gear.
2. Manually prevent the lower idler gear from turning.
3. Manually rotate the print shaft gear. This has the effect of "walking" the upper idler gear into position between the upper and lower gear.
4. When the correct position is reached, tighten the idler gear stud without allowing it to "walk" back to its previous position.

8 ROTATE ADJUSTMENTS (CEM 336) (3/77) (CEM 340)

"Selectric" Manufacturing is now adjusting rotate selection with a new electronic rotate homing system, which compensates each rotate band for selection system wear and typehead drift. This new procedure uses the -5 latch screw to adjust balance instead of the conventional balance lever adjustment.

If it is necessary to readjust the rotate mechanism, the current field method should be used. In the near future a redesigned balance lever and rotate arm will be incorporated. A new rotate adjustment procedure will be available at that time.

(Continued On Next Page)

The rotate arm and balance lever have been redesigned to improve adjustments. The balance lever has been changed to a solid lever and the balance adjustment is made by adjusting the -5 latch stop screw (Fig. 1). The rotate arm has been changed to a 2-piece arm (Fig. 2) and the motion adjustment is made by sliding the lower portion of the arm up or down.

The -5 stop screw is adjusted to obtain proper balance between positive and negative selections. Make this adjustment by first half cycling an uppercase "O" and observing its detent entry. Next half cycle a "T" and adjust the -5 stop screw in or out until the detenting of the "T" matches the detenting of the uppercase "O" previously observed.

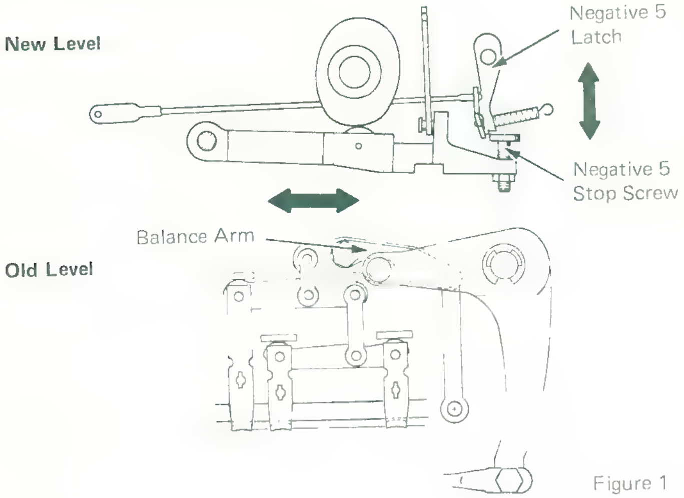


Figure 1

Rotate Arm Motion (2 Piece Arm) – To provide the proper motion in each direction of typehead rotation, the lower portion of the rotate arm must be vertically positioned. The correct position is determined by alternately observing the detenting of the "M" and "W." When the detenting is equal, the lower portion of the arm is positioned correctly.

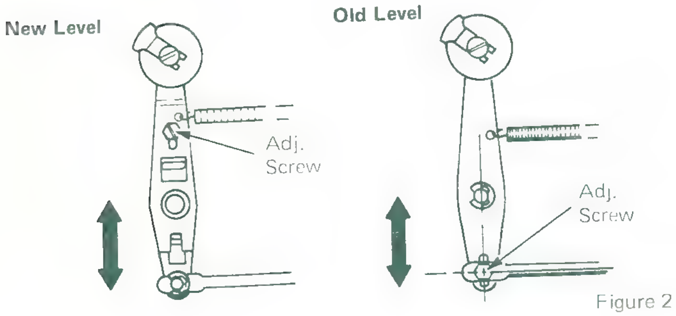


Figure 2

All other adjustments remain the same and either the APM or the service manual should be used in conjunction with this procedure.

1 TAB LEVER (RB/S) SPACING – BINDING

(CEM 337) (6/77)

When a (RB/S) tab lever binds, check the spacer (19-70) that is located between the tab lever (19-69) and the tab trigger (19-71). It may be cracked or broken.

8X3 between approx. S/N 1690000 & 1769-400. 8X5 between approx. S/N 3150700 & 3320000.

Recovery Code
Expired (3-78)

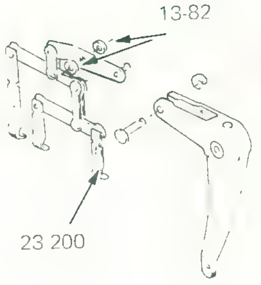
2 SOLID BALANCE ARM CONVERSION

(CEM 371) (8/78)

Former level adjustbale balance arm is no longer available. Orders will be substituted to the solid balance arm.

When installing the solid balance arm in the old level rotate bellcrank (23-220), install the two washers as shown.

The solid balance arm and the one piece rotate arm are compatible.



SHIFT

1 SHIFT DRIVE – ADJUSTMENT CHECK (10/68)

The shift clutch spring brake adjustment and proper overthrow stop adjustments can easily be checked by manually holding the detent roller away from the shift cam. After completion of either shift cycle, allow the detent roller to contact the shift cam. The detent roller should not rotate the cam more than 1/32" in either direction when the detent roller is fully bottomed in its cam detent notch.

2 SHIFT CLUTCH SPRING ADJUSTMENT (10/68)

1 To 3 Minutes:

1. Install shift clutch spring; allow the retaining plate screws to remain loose.
2. Place shift cam in uppercase position and hold in detented position.
3. Install clutch ratchet (uppercase position) so that its lug is toward the front of the machine and in front of the release arm lug.
4. Manually rotate the ratchet (clockwise) until the shift release arm lug now lies directly under the center of the clutch ratchet lug. The shift clutch spring and retaining plate will slip to a new position.
5. Remove the clutch ratchet and, without changing the setting, tighten one screw in the retaining plate. Do not allow the cam to become undetented.
6. Now reinstall the clutch ratchet, using the same spring hole as was previously used, and place it against the shift release arm (manually lock down the shift keybutton).
7. Set the overthrow stop clearance .010"-.025" (0,25-0,64mm) and tighten the other retaining plate screw.

3 SHIFT RELEASE LINK INCOMPATIBILITY (1/71)

A small number of machines were shipped with special studs mounted on the right-hand keyboard side frames. These required use of modified shift release links to provide the necessary clearance. Should there be occasion to replace these shift release links, the interfering studs may be removed to allow use of the standard release links.

4 SHIFT BACKUP ROLLER – ADJUSTMENT CHECK (10/68)

If the machine is locked up because the shift clutch spring loop is caught between the arbor and the cam, the backup roller adjustment should be checked. It has been found that a maladjusted shift backup roller allows the right-hand operational shaft bearing to be cammed in, thus increasing the clearance between the shift arbor and cam. This condition can be observed by observing the bearing for movement to the left when shifting to uppercase. The pusher end of the large springhook may be used as a wrench to easily adjust the shift backup roller eccentric shaft.

5 SHIFT ARM ROLLER WEAR (CEM 252) (4/74)

When taking a call as a result of malselection and no problem can be located, don't overlook the possibility of a worn shift arm roller. In most cases reported to date, wear of the roller has been caused by a rough finish on the shift cam. Replace cam along with roller if necessary.

6 SHIFT BEARING RETAINER PLATE ASSEMBLY (1/74)

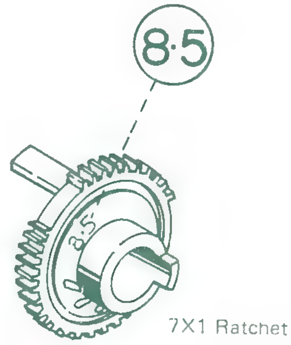
There have been three levels of the shift bearing retainer plate. The original was a die cast plate which is identified by its light gray color. The next level was a black punch-pressed plate with a removable bearing. The third and present level is a black punch-pressed plate with a non-removable bearing. This plate, P/N 1174331 (which includes the backup roller and retainer), is the only one available. The plate assembly is compatible with both the black plastic and steel cam. The white plastic cam is no longer available on machines with the white plastic cam, if either the cam or the bearing needs to be replaced. If replacement of the die cast plate is required, replace plate — reference (16-31), P/N 1174331, arm — reference (16-105), P/N 1175258, shaft — reference (16-52), P/N 1175261, two (2) C-clips — reference (16-102), P/N 1092125, spring — reference (16-104), P/N 1128303, screw — reference (16-101), P/N 1128356, nut — reference (16-100), P/N 38051 and spacer — reference (16-114), P/N 1091220.

7 SHIFT RATCHET IDENTIFICATION (CEM 145) (3/72)

The 7X1 shift ratchet (P/N 1174482) can now be identified by the marking 8.5. This marking was chosen because the 7X1 typewriter has an 8.5" (216mm) writing line.

The XX3, XX5 shift ratchet (P/N 1174439) has no markings.

Before, the 7X1 ratchet was identified by a silver colored release lug. These ratchets may be in stock and should still be used. (723's and 725's have a black release lug.)



7X1 Ratchet

8 SHIFT DETENT SPRING – PLASTIC CAM (CEM 235) (1/74)

Detent spring (16-216) can be used on early level plastic cam machines to give more reliable shift detenting. Clamp (16-218) must also be installed.

Caution: This is not a fix for improper shift adjustments or worn parts.

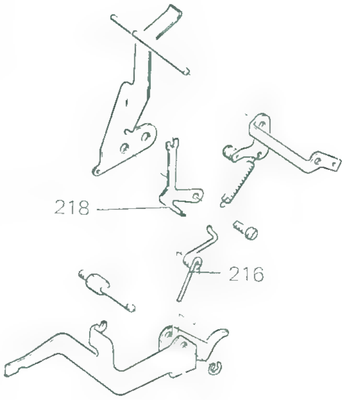


Figure 1

SOUND REDUCTION PACKAGE

1 STEEL MEMBRANE SUPPORT – CHANGED (CEM 330) (12/76)

The steel keyboard membrane support (30-25) has been replaced by a foam rubber support on machines manufactured with the sound reduction package.

Plant installed above approx. 8X3-1667030, 8X5-3117125.

SPACEBAR

2 SPACEBAR FAILURE TO RELEASE (10/68)

Failure of the spacebar to release may be caused by the cam release lever having too much overlap on the clutch wheel. The stop pad on the operational bracket may be formed to provide less overlap.

3 SPACEBAR FAILURE – ESCAPEMENT TRIGGER NOT RESTORING (1/71)

Spacebar failure can be caused by a maladjusted escapement cam or excessive back-up of the cycle shaft.

As the cycle cam shaft is stopped by the cycle clutch sleeve, it may bounce back. This in turn causes the filter shaft to rotate backward. If the filter shaft rotates backward enough due to gear backlash, the escapement cam will not be properly timed. The escapement cam roller will not be resting on the low part of the escapement cam. This may prevent the escapement trigger from restoring after a character operation.

To check, rotate the filter shaft counterclockwise (looking at the gear) and operate the spacebar. Spacebar failure indicates a maladjusted escapement cam or excessive gear backlash. Do not use turning wheel.

Caution: Rotate the filter shaft gear by the hub only.

4 INTERMITTENT SPACEBAR FAILURES (1/74)

Intermittent spacebar failures may be caused by the spacebar interposer (17-1) slipping to the side of the spacebar latch (17-300). This can also cause the latch spring (17-7) to come off.

This condition may be corrected by carefully forming the interposer to center it on the latch. Steps have been taken in the plant to correct this problem.

5 SPACEBAR INTERLOCK INTERMITTENT OR INOPERATIVE (10/68)

Some failures have been caused by not enough tension of the spacebar lockout spring. A check for this condition can be made by half-cycling any character and manually withdrawing the interlock from its active position. This check will indicate whether enough spring tension is available to pull the interlock fully into its active position.

The interlock may APPEAR to work reliably with the machine tilted up on its back, yet fail when the machine is placed in its normal typing position.

6 SPACEBAR BINDS (10/68)

In some cases failure of the spacebar to restore may be caused by the BS and CR repeat bail spring being attached too far to the left on the spacebar equalizing shaft screw. This will allow the coil of the spring to bind on the equalizing shaft.

7 SPACEBAR STIFF (1/71)

A spacebar that is hard to depress may be due to burrs on the operational interposer latch plate. Turn the plate over if burrs are on the latch side of the plate.

1 SPACEBAR INTERPOSER SPRING — INSTALLATION (10/68)

The spacebar interposer spring should be hooked in the top hole of the interposer to stop repeat operation.

2 SPACE TO PRINT B/M INSTALLATION — EARLY LEVEL MACHINES (10/68)

If it is necessary to install the Space to Print B/M 1274214 on machines before approximate S/Ns 7X1 — 4133735, 7X3 — 4754535, and 7X5 — 4418324, also order and install B/M 1269569 so the link in B/M 1274214 may be attached to the interposer.

TAB

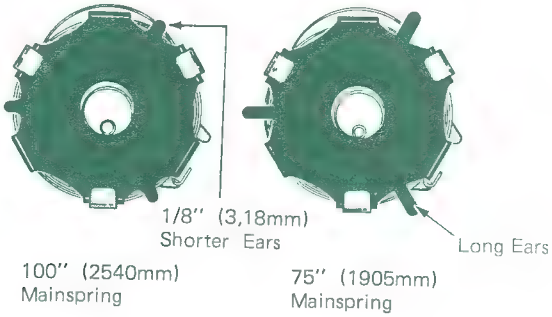
3 TAB TORQUE BAR BINDING (10/68)

The extension on the left-hand side of the deflector may come in contact with the part of the tab torque bar to which the tab link attaches. This will cause the tab lever pawl not to latch out. To stop this condition approximately 3/32 of an inch should be cut off the extension. After cutting, use a file to remove all sharp corners.

4 MAINSPRING IDENTIFICATION (1/74)

"Selectric" Typewriters may have either a 75" (1,905mm) or 100" (2,540mm) mainspring. The 75" (1,905mm) mainspring should be wound only five (5) turns with carrier at far right.

The 100" (2,540mm) mainspring should be wound (7) seven turns with the carrier at far right.

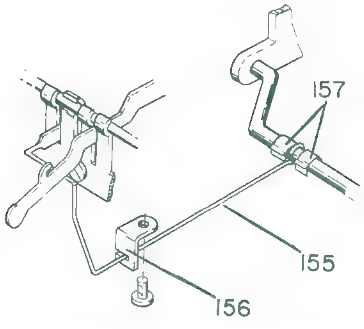


5 TAB KEYLEVER LINELOCK — FIELD INSTALLATION B/M (CEM 163) (5-72)

Most over-cleared and over-set tab stops are caused by the tab being actuated and the tab rack being rotated when the machine is turned off.

To prevent over-cleared and over-set tab stops, install B/M to prevent tab operation when switch is off. Attach guide (18-156) to link (18-155) before installing. Disengage left end of linelock bail to install link.

Form the link (18-155) to not interfere with the tab keylever when the machine is on and to not allow the tab to be actuated with the machine off.



200—TAB KEYLEVER LINELOCK

1 DUAL PITCH TAB SET AND CLEAR BRACKET (CEM 373) (2/79)

When replacing the grease filled tab rack with the friction rack (19-31) in machines with tie rod paper feed, the set-clear bracket (19-2) should **not** be changed. The new bracket (19-2) will interfere with the tie rod frame. The old style bracket can be adjusted for proper operation.

2 TRANSPORT CORD PULLEY ASSEMBLIES – REDESIGNED (CEM 376) (11/78)

The transport pulleys (03-365, 03-366, 18-130, 19-149) have been changed to molded plastic (Fig. 1). Plastic and steel assemblies are interchangeable. Steel pulleys will remain available until existing stock is depleted. Individual parts for these assemblies will not be available.

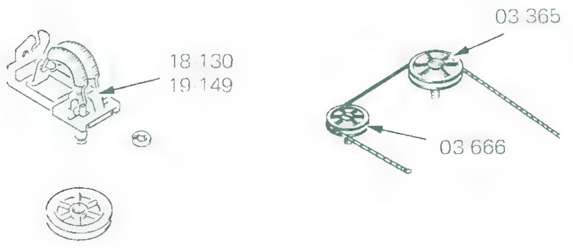


Figure 1

1 SAFETY 7-16-80

Model(s): All Typewriters

SUBJECT: Tilt-Up Position

This Information Previously Appeared in General CEM No. 68, Dated 1-26-77.

When tilting a typewriter to its service position, caution should be observed if the typewriter is resting on any sound deadening pad or other material. The pad's cushioning effect could make the typewriter very unstable in this position and it could fall.

2 SAFETY 7-16-80

Model(s): All Products Using PCB Capacitors (Revised) 2-24-82

SUBJECT: AC Capacitor Safety

A Portion Of This Information Previously Appeared In General CEM No. 81, Dated 2-22-78.

PURPOSE: Provide a safe method of removal and disposal of defective PCB (Polychlorinated Biphenyl) capacitors.

SAFETY PRECAUTION: PCB is a toxic material and an environmental contaminant contained in some AC capacitors and transformers used in IBM products. PCB may be toxic by inhalation, skin absorption or ingestion and has caused dermatitis. PCB has a low-vapor pressure at normal temperatures, so the inhalation risk is slight except at elevated temperatures. The seal of a capacitor may fail or leak due to thermal expansion. Considering the limited number of capacitor failures, the possibility of a leaking capacitor is infrequent.

SAFETY CORRECTIVE ACTION: The following procedures are required:

A. All PCB components replaced during service must be returned to the IBM Branch Office. They must be identified as "PCB Return."
B. In the event of a spillage or leakage of PCB oil:
  1. Allow the PCB oil to cool.
  2. Wear rubber (T23-30) or plastic (T23-15) gloves.
  3. Do not allow PCB oil to come in contact with skin or clothing.
  4. If skin contact with PCB oil occurs, wash affected area thoroughly with soap and water. In the event of eye contact, flush immediately with water for 15 minutes and contact a physician.
  5. If PCB oil comes in contact with clothing, rinse affected area with water and launder or dry clean as soon as practical.
  6. Absorb any spillage or leakage with a cloth or paper towel.
  7. Clean affected area with a cloth containing IBM cleaning fluid.
  8. Place defective device, cloth or towel and gloves into a plastic bag, tie or seal.
  9. Return sealed bag, identified as "PCB Return" to your IBM Branch Office.
  10. The Branch Office will ship returned PCB components and materials to:

      Mechanicsburg Distribution Center
      Maintenance Department
      Attn: Capacitor Return Coordinator

  11. Indicate on the return carton "PCB Return" and affix PCB label (F/N G229-0261).

Note: Do not mix any other parts with this return material.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
T19	5	9900387	Accessory Bag	1	.20
T23	15	2200041	Plastic Gloves (100 Per Box)	1	9.55
	30	9900644	Rubber Gloves (12 Per Box)	1	18.00

PART NUMBERS OF PCB BEARING ITEMS ARE:

MODEL	DESCRIPTION	MECH/REF	PCB PN
MT/ST	Printer Drive Motors	11-16	1203288 1203295 1166431
	Power Supplies M/C — Graphics	83-23	1160398 1160794
MT/SC	Printer Drive (Motor Start)	31-9	1173353 1173570
	Power Supplies M/C — Graphics	87-34 34	1176776 5213359
	Translator Motor Asm.	30-13 13	1160594 1166431
MC/ST E/MC	Card Deck Drive Motors	50-36	1149698
MC II MC/A	Printer Drive	11-1 10	1457710 1457701
	Power Supplies Power Supplies M/C — Graphics	93-001 93-XXX XXX	1462910 5708948 1149698
C/MC	Power Supplies M/C — Graphics	72-XXX XXX	1149211 1149559
MEMORY	Printer Drive Motors	11-240	1470016
IPE 210	Motor Drive	602-14	1132435
MC/ST	Card Deck Drive Motor (Motor Start)	50-23	1149090
	Power Supplies M/C — Graphics	64-XXX XXX	1149211 1149559
MT/SC (TTR)	Power Supplies MC -- Graphics	87-34	1450437
MT/ST (Remote)	Power Supplies MC — Graphics	XX-XXX	1161684
Typebar ET	Motor And Drive	11-XXX	1072125 1106594 1107025 1166431
MT/ST (Card Reader)	Power Supplies MC — Graphics	XX-XXX	1160398
MT/SR (LCRO)	Power Supplies MC — Graphics	83-23 23	1160398 1160794
E/MC	Power Supplies MC — Graphics	64-XXX XXX XXX	1149211 1149559 1149743
	Printer Drive Motors	11-1 10	1470020 1149743
E/MC MAG I	Printer Drive Motors	11-10 10	1457702 1203295
MAG I	Printer Drive Motors	11-10	1187099
COPIER	Main Drive Motor	04-17	1151019
	Brush Motor	22-103 103	1203295 1203288
	Paper Vacuum Motor	53-16 16	725009 2122115
	Power Supply	56-2 2 4 4 5 5	1150013 1151244 1150012 1151243 1150011 1151242
	Balast Asm.	56-103 103 103	1150039 1151009 1151000
COPIER II	Main Drive Motor	04-179	1242004
	Main Drive St.	04-188	1559748
	Standby Drive Motor	04-277 277	1166431 1249373

(Continued)

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(CEM 2 Continued)

	Brush Motor	14-46	1203295
		46	5213359
		46	1187099
	Dev. Dr. Motor	28-211	752009
		211	1242761
		224	1242004
		224	1242760
	Doc. Feed Motor	40-89	1242004
		89	1244785
	Power Supply	56-19	1242102
		19	1242445
		20	1242101
		20	1242443
		31	1243468
		31	1243819
	Capacitor	58-126	1249415
	Fan Asm., Paper Vacuum	61-137	5252848
		137	5252836
"SELECTRIC" TYPEWRITER	Motor And Drive	11-16	1174325
		XXX	1174326
		XXX	1203288
		XXX	1203295
MISC.	Assembly		5261288
	Assembly		1203205
	Assembly		1095027
	Capacitor		1146147
	Capacitor		951147
	Capacitor		1173353
	Capacitor		1106594

3 SAFETY 9-24-80

SUBJECT: Serial List Holder – Sharp Edges

SAFETY LOCATION: Branch Office Serial List Holders, F/N 241-6291 and F/N 241-6290.

SAFETY PRECAUTION: Check the clips for sharp edges, including the ends of the wires.

SAFETY CORRECTIVE ACTION: File or polish all sharp edges.

4 SAFETY 2-11-81

SUBJECT: AC Connectors – Exposed Terminals

SAFETY LOCATION: AC service connectors with missing or damaged heat shrink/tape. An AC service connector is any AC connector that must be disconnected with AC power applied to perform a diagnostic procedure.

SAFETY PRECAUTION: A shock hazard exists, if any AC service connector has damaged or missing insulation and a connector pin is pushed out the back of the service connector.

SAFETY CORRECTIVE ACTION: Inspect all AC service connectors for heat shrink/tape damage before disconnecting or reconnecting the service connector. If the heat shrink/tape is damaged or missing:

1. Turn off the machine and unplug from wall outlet.
2. Verify that all connector pins are properly seated.
3. Tape the connector with electrical tape (T21-33) (Figure 1).

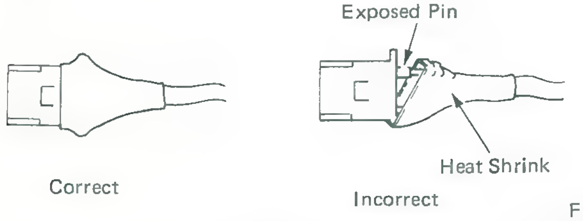

Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
T21 33	450692	Electrical Tape	1	—

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Service Code 33

This CEM Expires 2-11-82

5 SAFETY 10-7-81

SUBJECT: Motor And Drive Double Insulation System

PURPOSE: A possible safety exposure exists to the Customer Engineer in the Motor And Drive Double Insulation System.

SAFETY INFORMATION: The Double Insulation System is designed to protect from possible electrical shock. This is accomplished by isolating all hazardous voltage by at least two separate and unrelated levels of insulation (Figure 1). The Double Insulation System does not fully protect the Customer Engineer. The possibility of an electrical shock is increased because there is only one level of insulation between the Customer Engineer and the live parts of the motor when the covers are removed and the CE is servicing the machine in this area. The motor shell is not double insulated, but has only basic insulation (Figure 1) 1st level of insulation. The second level of insulation consists of the motor mounts.

CEs must be aware that on 2 wire double insulated machines, an insulation fault in the motor will result in a shock if the motor shell is touched along with a ground source.

SAFETY PRECAUTION: Turn the motor switch off prior to touching the motor shaft or shell. Do not hold motor in your hand to test. (To check for a faulted motor, make a resistance check between the motor shell and the motor leads, using your Volt-Ohm Meter. A reading of infinity indicates good insulation.)

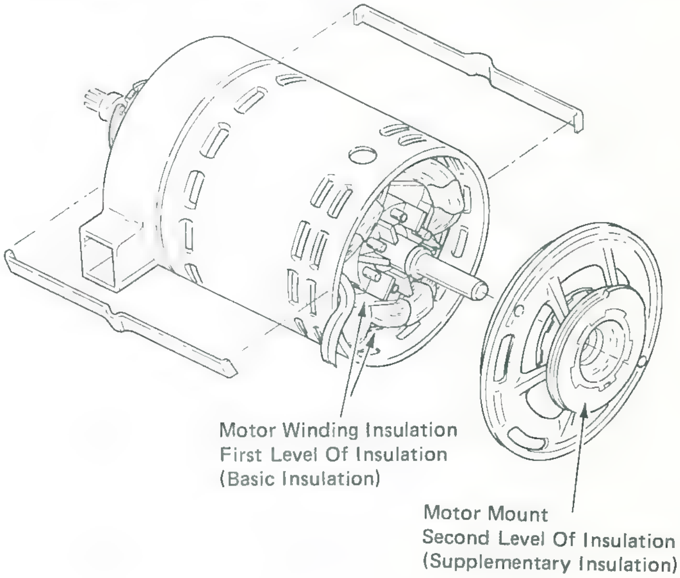
Motor Winding Insulation
First Level Of Insulation
(Basic Insulation)
Motor Mount
Second Level Of Insulation
(Supplementary Insulation)

Figure 1

NOTE: On 3 wire machines, if the ground strap is not present between the motor and frame (or is not properly installed), the risk of a shock is somewhat higher than with Double Insulated machines because the machine frame is grounded.

6 SAFETY 10-7-81

SUBJECT: IBM Hand Cleaner (P/N 1354922)

SAFETY PRECAUTION: The label for IBM hand cleaner (P/N 1354922) was changed to specify the active ingredient. The label states:

> "CAUTION: Contains sodium dichloro-s-triazinetrione dihydrate (bleaching agent). MAY BE HARMFUL IF SWALLOWED. AVOID EYE CONTACT. If swallowed, give water or milk. Call a physician. For eye contact, flush liberally with water. Call physician. Keep out of reach of children."

SAFETY CORRECTIVE ACTION: : Scrap packages that do not specify the active ingredient.

1 SAFETY 1-13-82

SUBJECT: General Purpose Cleaner (P/N 9900632) and Cover Cleaner (P/N 450891)

SAFETY CORRECTIVE ACTION: The IBM General Purpose Cleaner (P/N 9900632) and Cover Cleaner (P/N 450891) should not be used from a spray bottle. Using a spray bottle causes a mist of alkaline solution to become airborne that could be an irritant to the eyes and throat; this is not the case if it is poured from the container.

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1 SAFETY 7-16-80

Model(s): All Typewriters

SUBJECT: TILT–UP POSITION

This Information Previously Appeared in General CEM No. 68, Dated 1-26-77.

When tilting a typewriter to its service position, caution should be observed if the typewriter is resting on any sound deadening pad or other material. The pad's cushioning effect could make the typewriter very unstable in this position and it could fall.

2 SAFETY 7-16-80

Model(s): All Products Using Capacitors (Revised) 9-8-82

SUBJECT: CAPACITOR SAFETY

A Portion Of This Information Previously Appeared In General CEM No. 81, Dated 2-22-78 and FE/GS General Safety CEM No. 76, Dated 1-26-79.

PURPOSE:
Provide a safe method of removal and disposal of defective capacitors.

SAFETY PRECAUTION:
PCB is a toxic material and an environmental contaminant contained in some AC capacitors and transformers used in IBM products. PCB may be toxic by inhalation, skin absorption or ingestion and has caused dermatitis. PCB has a low-vapor pressure at normal temperatures, so the inhalation risk is slight except at elevated temperatures. Other solvent systems in capacitors may cause similar reactions. Cases of a reaction have occurred after repeated or prolonged exposure. The seal of a capacitor may fail or leak due to thermal expansion. Considering the limited number of capacitor failures, the possibility of a leaking capacitor is infrequent.

SAFETY CORRECTIVE ACTION:
The following procedures are required:

A. All PCB components replaced during service must be returned to the IBM Branch Office. They must be identified as "PCB Return." Only PCB components should be returned.

B. In the event of spillage or leakage of capacitor contents:
   1. Allow the liquid to cool.
   2. Wear rubber (T23-30) or plastic (T23-15) gloves.
   3. Do not allow the liquid or any liquid contaminated substance to come in contact with skin or clothing.
   4. If skin contact does occur, wash affected area thoroughly with soap and water. In the event of eye contact, flush immediately with water for 15 minutes and contact a physician.
   5. If any capacitor solvent system comes in contact with clothing, rinse affected area with water and launder or dry clean as soon as practical.
   6. Absorb any spillage or leakage with a cloth or paper towel.
   7. Clean affected area with a dry cloth or one containing soap and water.
   8. Place defective device, cloth or towel and gloves into a plastic bag, tie or seal.
   9. Return sealed bag to your IBM Branch Office, identified as "PCB Return." All other types of capacitors should be disposed.
   10. The Branch Office will ship returned PCB components and materials to:

       Mechanicsburg Distribution Center
       Maintenance Department
       Attn: Capacitor return Coordinator
   11. Do not mix any other parts with this return material.
   12. Indicate on the return carton "PCB Return" and affix PCB label (F/N G229-0261).

MECH/REF		PART NO.	DESCRIPTION	QTY
T19	5	9900387	Accessory Bag	1
T23	30	9900644	Rubber Gloves (12 Per Box)	1
T23	15	2200041	Plastic Gloves (100 Per Box)	1

PART NUMBERS OF PCB BEARING ITEMS ARE:

MODEL	DESCRIPTION	MECH/REF	PCB PN
MT/ST	Printer Drive Motors	11-16	1203288 1203295 1166431
	Power Supplies M/C – Graphics	83-23	1160398 1160794
MT/SC	Printer Drive (Motor Start)	31-9	1173353 1173570
	Power Supplies M/C – Graphics	87-34 34	1176776 5213359
	Translator Motor Asm.	30-13 13	1160594 1166431
MC/ST E/MC	Card Deck Drive Motors	50-36	1149698

Continued

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(CEM No. 2 Continued)

MC II MC/A	Printer Drive	11-1	1457710
		10	1457701
	Power Supplies	93-001	1462910
	Power Supplies	93-XXX	5708948
	M/C — Graphics	XXX	1149698
C/MC	Power Supplies	72-XXX	1149211
	M/C — Graphics	XXX	1149559
MEMORY	Printer Drive Motors	11-240	1470016
IPE 210	Motor Drive	602-14	1132435
MC/ST	Card Deck Drive Motor (Motor Start)	50-23	1149090
	Power Supplies	64-XXX	1149211
	M/C — Graphics	XXX	1149559
MT/SC (TTR)	Power Supplies	87-34	1450437
	MC — Graphics		
MT/ST (Remote)	Power Supplies	XX-XXX	1161684
	MC — Graphics		
Typebar ET	Motor And Drive	11-XXX	1072125
			1106594
			1107025
			1166431
MT/ST (Card Reader)	Power Supplies	XX-XXX	1160398
	MC — Graphics		
MT/SR (LCRO)	Power Supplies	83-23	1160398
	MC — Graphics	23	1160794
E/MC	Power Supplies	64-XXX	1149211
	MC — Graphics	XXX	1149559
		XXX	1149743
	Printer Drive Motors	11-1	1470020
		10	1149743
E/MC MAG I	Printer Drive Motors	11-10	1457702
		10	1203295
MAG I	Printer Drive Motors	11-10	1187099
COPIER	Main Drive Motor	04-17	1151019
	Brush Motor	22-103	1203295
		103	1203288
	Paper Vacuum Motor	53-16	725009
		16	2122115
	Power Supply	56-2	1150013
		2	1151244
		4	1150012
		4	1151243
		5	1150011
		5	1151242
	Balast Asm.	56-103	1150039
		103	1151009
		103	1151000
COPIER II	Main Drive Motor	04-179	1242004
	Main Drive St.	04-188	1559748
	Standby Drive Motor	04-277	1166431
		277	1249373
	Brush Motor	14-46	1203295
		46	5213359
		46	1187099
	Dev. Dr. Motor	28-211	752009
		211	1242761
		224	1242004
		224	1242760
	Doc. Feed Motor	40-89	1242004
		89	1244785
	Power Supply	56-19	1242102
		19	1242445
		20	1242101
		20	1242443
		31	1243468
		31	1243819
	Capacitor	58-126	1249415
	Fan Asm., Paper Vacuum	61-137	5252848
		137	5252836
"SELECTRIC" TYPEWRITER	Motor And Drive	11-16	1174325
		XXX	1174326
		XXX	1203288
		XXX	1203295

Components not indentified with specific products, (See Pocket Reference Manual, FN S229-2023-8.

MISC.	Assembly	5261288
	Assembly	1203205
	Assembly	1095027
	Capacitor	1146147
	Capacitor	951147
	Capacitor	1173353
	Capacitor	1106594
	Assembly	00098866
	Assembly	00100742
	Assembly	00106336
	Assembly	00127109
	Assembly	00127481
	Assembly	00129638
	Assembly	00148012
	Assembly	00176407
	Assembly	00176409
	Assembly	00193257
	Assembly	00196403
	Assembly	00207353
	Assembly	00207361
	Assembly	00208388
	Assembly	00209205
	Assembly	00210873
	Assembly	00220893
	Assembly	00220902
	Assembly	00222854
	Assembly	00222857
	Assembly	00223355
	Assembly	00227479

Continued

(CEM No. 2 Continued)

Assembly	00237310
Assembly	00268715
Assembly	00282411
Assembly	00302064
Assembly	00303529
Assembly	00310262
Assembly	00310263
Assembly	00311814
Assembly	00311815
Assembly	00316104
Assembly	00317045
Assembly	00322474
Assembly	00322475
Assembly	00322477
Assembly	00323987
Assembly	00327908
Assembly	00328480
Assembly	00332840
Assembly	00347017
Assembly	00349663
Assembly	00351784
Assembly	00361536
Assembly	00441321
Capacitor	00441338
Capacitor	00442688
Capacitor	00470760
Capacitor	00477202
Capacitor	00477280
Capacitor	00478047
Assembly	00480765
Capacitor	00483862
Capacitor	00501543
Capacitor	00505337
Capacitor	00505338
Capacitor	00505339
Capacitor	00505356
Capacitor	00511089
Capacitor	00517252
Capacitor	00520655
Capacitor	00520707
Capacitor	00524854
Capacitor	00526341
Capacitor	00528411
Capacitor	00553400
Assembly	00586321
Capacitor	00603257
Assembly	00620250
Assembly	00629209
Assembly	00639211
Assembly	00639212
Assembly	00644512
Assembly	00647289
Assembly	00647633
Assembly	00721301
Capacitor	00725009
Capacitor	00730272
Assembly	00737734
Capacitor	00743006
Capacitor	00749339
Assembly	00760159
Capacitor	00766330
Assembly	00801640
Assembly	00801646
Capacitor	00803445
Assembly	00810744
Capacitor	00951147
Capacitor	00951918
Assembly	00964649
Capacitor	01072125
Capacitor	01106594
Capacitor	01107025
Capacitor	01119144
Capacitor	01143069
Capacitor	01143178
Capacitor	01146147
Capacitor	01146691
Capacitor	01149698
Capacitor	01160398
Capacitor	01161684
Capacitor	01166431
Capacitor	01173353
Assembly	01174325
Assembly	01174326
Capacitor	01176776
Assembly	01176777
Capacitor	01203288
Capacitor	01203295
Capacitor	01242004
Capacitor	01249222
Assembly	01452240
Assembly	01452751
Capacitor	01457701
Assembly	01566010
Assembly	01568472
Assembly	01568476
Assembly	01568498
Assembly	01573500
Capacitor	01573509
Assembly	01786430
Assembly	01838655
Capacitor	02122115
Capacitor	02129258
Capacitor	02145103
Assembly	02156009
Capacitor	02159748
Capacitor	02160807
Assembly	02181811
Capacitor	02195276
Capacitor	02274526
Capacitor	02281099
Capacitor	02283004
Assembly	02285949
Capacitor	02286136
Assembly	02302303
Assembly	02306520
Assembly	02361770

Continued

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(CEM No. 2 Continued)

Assembly	02447573
Capacitor	02450348
Assembly	02481165
Assembly	02481240
Assembly	02517788
Assembly	02521491
Assembly	02544840
Assembly	02557870
Assembly	02557880
Assembly	02557890
Assembly	02557900
Assembly	02557910
Assembly	02562460
Assembly	02562480
Assembly	02565715
Assembly	02572190
Assembly	02572780
Assembly	02572810
Assembly	02582920
Assembly	02582950
Assembly	02582970
Assembly	02583950
Assembly	02583960
Assembly	02584080
Assembly	02590218
Assembly	02590224
Assembly	02593438
Assembly	02594279
Assembly	02609010
Assembly	02611720
Assembly	02611740
Assembly	02611760
Assembly	02625680
Capacitor	02638440
Assembly	02703922
Assembly	02703923
Assembly	02729344
Capacitor	02807365
Assembly	04014339
Capacitor	04116231
Capacitor	04165700
Assembly	04686601
Assembly	04686604
Assembly	05151660
Assembly	05170878
Assembly	05170880
Assembly	05182450
Capacitor	05182454
Capacitor	05184729
Capacitor	05213359
Capacitor	05214085
Capacitor	05214403
Capacitor	05214404
Capacitor	05214412
Assembly	05232760
Assembly	05232820
Assembly	05232830
Assembly	05232850
Assembly	05239112
Assembly	05239460
Assembly	05240445
Assembly	05240499
Assembly	05247043
Assembly	05247114
Assembly	05247120
Assembly	05247121
Capacitor	05247156
Capacitor	05252571
Capacitor	05252572
Capacitor	05252588
Capacitor	05252624
Capacitor	05252657
Capacitor	05252695
Capacitor	05257503
Capacitor	05257506
Assembly	05261010
Assembly	05261090
Assembly	05261200
Capacitor	05261388
Capacitor	05261390
Assembly	05261523
Assembly	05261810
Assembly	05261818
Assembly	05261830
Assembly	05261910
Capacitor	05319839
Assembly	05357001
Assembly	05357002
Assembly	05357004
Assembly	05357005
Capacitor	05357137
Assembly	05373760
Assembly	05383097
Assembly	05397675
Assembly	05404080
Assembly	05404085
Capacitor	05405155
Assembly	05468230
Assembly	05468312
Assembly	05468313
Assembly	05515890
Assembly	05518020
Assembly	05518400
Assembly	05526814
Assembly	05548306
Assembly	05700650
Assembly	05703200
Assembly	05703392
Capacitor	05704962
Assembly	05708920
Capacitor	05708948
Assembly	05709000
Assembly	05709400
Assembly	05709410
Assembly	05709560
Assembly	05709650
Assembly	05709690
Capacitor	05738734
Assembly	05738760
Assembly	05738770
Assembly	05760620
Assembly	05760700
Capacitor	05760726
Assembly	05760810
Assembly	05761310
Assembly	05761420
Assembly	05761600
Assembly	05761610
Assembly	05761710
Assembly	05761740
Assembly	05761750
Assembly	05761760

Continued

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(CEM No. 2 Continued)

Assembly	05761780
Assembly	05761900
Assembly	05762220
Assembly	05762230
Assembly	05762360
Assembly	05762400
Assembly	05762460
Assembly	05762470
Assembly	05762550
Assembly	05782349
Assembly	05795678
Assembly	05795680
Assembly	05888309
Capacitor	07365759
Capacitor	08010761
Assembly	08029824

3 SAFETY 9-24-80

SUBJECT: SERIAL LIST HOLDER — SHARP EDGES

SAFETY LOCATION:
Branch Office Serial List Holders, F/N 241-6291 and F/N 241-6290.

SAFETY PRECAUTION:
Check the clips for sharp edges, including the ends of the wires.

SAFETY CORRECTIVE ACTION:
File or polish all sharp edges.

4 SAFETY 2-11-81

SUBJECT: AC CONNECTORS — EXPOSED TERMINALS

SAFETY LOCATION:
AC service connectors with missing or damaged heat shrink/tape. An AC service connector is any AC connector that must be disconnected with AC power applied to perform a diagnostic procedure.

SAFETY PRECAUTION:
A shock hazard exists, if any AC service connector has damaged or missing insulation and a connector pin is pushed out the back of the service connector.

SAFETY CORRECTIVE ACTION:
Inspect all AC service connectors for heat shrink/tape damage before disconnecting or reconnecting the service connector. If the heat shrink/tape is damaged or missing:

1. Turn off the machine and unplug from wall outlet.
2. Verify that all connector pins are properly seated.
3. Tape the connector with electrical tape (T21-33) (Figure 1).

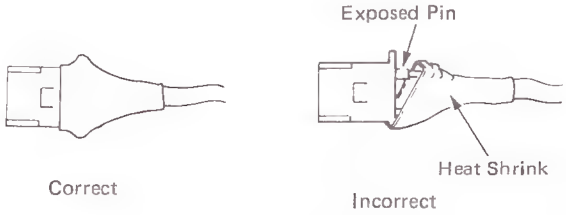

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY
T21	33	450692	Electrical Tape	1

Estimated Installation Time: .1 Hr.

Use Service Code 33 This CEM Expires: 2-11-82

5 SAFETY 10-7-81

SUBJECT: MOTOR AND DRIVE DOUBLE INSULATION SYSTEM

PURPOSE:
A possible safety exposure exists to the Customer Engineer in the Motor And Drive Double Insulation System.

SAFETY INFORMATION:
The Double Insulation System is designed to protect from possible electrical shock. This is accomplished by isolating all hazardous voltage by at least two separate and unrelated levels of insulation (Figure 1). The Double Insulation System does not fully protect the Customer Engineer. The possibility of an electrical shock is increased because there is only one level of insulation between the Customer Engineer and the live parts of the motor when the covers are removed and the CE is servicing the machine in this area. The motor shell is not double insulated, but has only basic insulation (Figure 1) 1st level of insulation. The second level of insulation consists of the motor mounts.

CEs must be aware that on 2 wire double insulated machines, an insulation fault in the motor will result in a shock if the motor shell is touched along with a ground source.

SAFETY PRECAUTION:
Turn the motor switch off prior to touching the motor shaft or shell. Do not hold motor in your hand to test. (To check for a faulted motor, make a resistance check between the motor shell and the motor leads, using your Volt-Ohm Meter. A reading of infinity indicates good insulation.)

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(CEM No. 5 Continued)

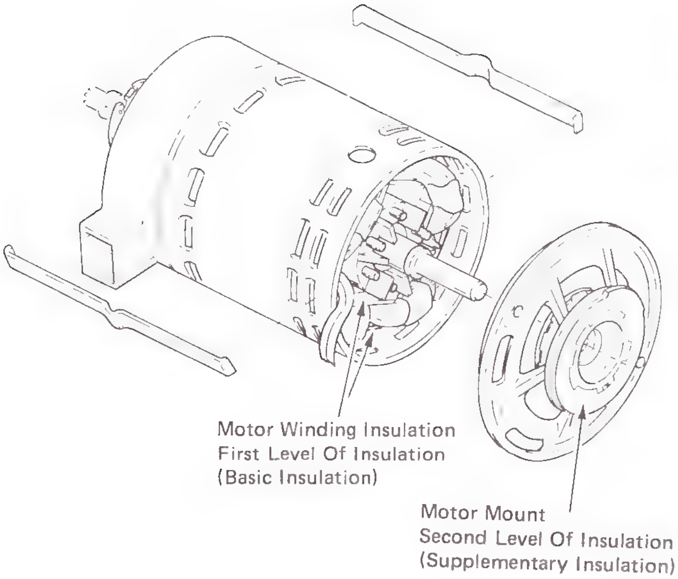
Motor Winding Insulation
First Level Of Insulation
(Basic Insulation)
Motor Mount
Second Level Of Insulation
(Supplementary Insulation)

Figure 1

NOTE: On 3 wire machines, if the ground strap is not present between the motor and frame (or is not properly installed), the risk of a shock is somewhat higher than with Double Insulated machines because the machine frame is grounded.

6 SAFETY 10-7-81

SUBJECT: IBM HAND CLEANER (P/N 1354922)

SAFETY PRECAUTION:
The label for IBM hand cleaner (P/N 1354922) was changed to specify the active ingredient. The label states:

> "CAUTION: Contains sodium dichloro-s-triazinetrione dihydrate (bleaching agent). MAY BE HARMFUL IF SWALLOWED. AVOID EYE CONTACT. If swallowed, give water or milk. Call a physician. For eye contact, flush liberally with water. Call physician. Keep out of reach of children."

SAFETY CORRECTIVE ACTION:
Scrap packages that do not specify the active ingredient.

7 SAFETY 1-13-82

SUBJECT: GENERAL PURPOSE CLEANER (P/N 9900632)
AND COVER CLEANER (P/N 450891)

SAFETY CORRECTIVE ACTION:
The IBM General Purpose Cleaner (P/N 9900632) and Cover Cleaner (P/N 450891) should not be used from a spray bottle. Using a spray bottle causes a mist of alkaline solution to become airborne that could be an irritant to the eyes and throat; this is not the case if it is poured from the container.

8 SAFETY 9-8-82

SUBJECT: COMPONENTS CONTAINING MERCURY

This information previously appeared in FE/GS General/Safety CEM No. 92, dated 11/30/81.

PURPOSE:
Provide a safe method of return of components containing mercury.

SAFETY PRECAUTION:
Precaution should be taken to minimize skin contact and vapor inhalation of components containing mercury. Also, to prevent possible environmental pollution, the waste disposal of mercury batteries, switches, relays, fluorescent lamps, and other components containing mercury, must be controlled.

SAFETY CORRECTIVE ACTION:
Any time a broken part results in release of liquid mercury, the mercury must be cleaned up, packaged with the broken parts, and returned to the branch office. The liquid mercury may be picked up using a coil of solder or copper wire. The mercury will coat a clean surface of solder or copper and be removable. The coated coils, broken parts, depleted batteries, etc., should be placed in a plastic bag, any sharp points protected, the bag sealed and placed in a carton for return to the branch office. The branch office should return these components to:

IBM Corporation
Department 757/B995
11400 F.M. Road 1325
Austin, TX 78759

9 SAFETY 9-8-82

SUBJECT: CATHODE RAY TUBE SAFETY

This information previously appeared in FE/GS General/Safety CEM No. 87, dated 6/27/80.

PURPOSE:
Provide a safe method of storing and handling CRT's.

SAFETY PRECAUTION:
The primary hazard of CRT's is flying glass as a result of an implosion. The following sections deal with different phases of CRT safety. All phases are equally important and negligence in any area could result in possible injury to an employee or customer.

Any additional information or variations from this information will be included under that specific unit's CEM.

Continued

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(CEM No. 9 Continued)

SAFETY CORRECTIVE ACTION:

STORAGE OF CATHODE RAY TUBES

1. It is required that cathode ray tubes be enclosed when received, transported, or otherwise moved from area to area. If they are shipped in a carton, they must be in the original carton or one of equivalent strength and securely sealed to prevent accidental opening. Also, original or equivalent packing material and/or forms must be placed inside the carton to give the tube the proper support and protection. If tubes are transported in a unit or piece of equipment, the equipment must be able to contain the glass fragments should an implosion occur.
2. CRT's should be stocked as per directions on manufacturer's carton. When in doubt, stock with faceplate (viewing surface) down. Cartons should not be stacked more than two high.
3. CRT storage areas will be away from normal flow of material handling equipment and pedestrian traffic. Also, storage areas must be dry to insure that cartons will not absorb moisture and collapse.

MAINTENANCE AND INSTALLATION

1. No one shall be permitted to install, adjust, maintain, replace or handle high vacuum tubes until he/she has reviewed this CEM.
2. When cathode ray tubes are received, transported, or otherwise moved from area to area, they should be completely enclosed in their original shipping carton and sealed.
3. To minimize the hazard from flying debris, safety glasses and long sleeve garments must be worn.
4. Tubes under vacuum will not be permitted to remain out of their carton unless they are under test or inspection.
5. Avoid scratching or bumping any part of the tube because this may weaken the glass and possibly cause it to implode.
6. Prior to removal of any high vacuum tube, discharge all stored potential which may exist on the tube's anode button or base socket pins and the capacitor in the high voltage supply. (NOTE: Some cathode ray tubes contain a conductive coating on both the inside and outside surfaces to form a capacitor. Within some tubes, a second capacitive charge builds up following the original discharge. It is, therefore, important to discharge each tube a second time immediately before removal.)
7. Do not handle cathode ray tubes by the neck alone. The neck is the weakest part of the tube and is easily broken. Always handle tubes with two hands. If the CRT is shipped with a lifting strap, this strap should be used for the removal of a tube from, and placement of a tube into, the shipping container.
8. When inserting or removing tubes from equipment, they must be supported by the large end while carefully guiding the neck in or out of position. The lifting strap, if present, can be used in this process.
9. Avoid placing the tubes on a table or bench when there is any possibility of the tube rolling. If it is necessary to place a tube anywhere except in its special carton, a piece of felt or other soft material should be placed under it to prevent scratching the glass. Place larger tubes vertically on their faces, and not on their sides to prevent the possibility of rolling.
10. When removing a tube from equipment, it should be enclosed in its shipping container as soon as possible to reduce the chance of breaking. Cathode ray tubes should be placed in the carton with the large face end up and the neck down. Be sure that the weight of the tube is not resting on the neck. The container should be sealed securely with strong tape and, to prevent tipping, turned over so the tube is positioned face down.

DISARMING CATHODE RAY TUBES

Field personnel should not disarm cathode ray tubes. Tubes will be disarmed and disposed of in accordance with existing Environmental Protection Agency requirements at the plant of return or established disposal site.

DISPOSAL OF CATHODE RAY TUBES

Return CRT's to the branch office. Instructions for the disposal of cathode ray tubes are available in FE I/D letter 081-021. In the near future, the same information will be available in a CSD Safety/Health Reference booklet which will be distributed to all CSD Branch Offices.

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(CEM No. 9 Continued)

SAFETY CORRECTIVE ACTION:

STORAGE OF CATHODE RAY TUBES

1. It is required that cathode ray tubes be enclosed when received, transported, or otherwise moved from area to area. If they are shipped in a carton, they must be in the original carton or one of equivalent strength and securely sealed to prevent accidental opening. Also, original or equivalent packing material and/or forms must be placed inside the carton to give the tube the proper support and protection. If tubes are transported in a unit or piece of equipment, the equipment must be able to contain the glass fragments should an implosion occur.
2. CRT's should be stocked as per directions on manufacturer's carton. When in doubt, stock with faceplate (viewing surface) down. Cartons should not be stacked more than two high.
3. CRT storage areas will be away from normal flow of material handling equipment and pedestrian traffic. Also, storage areas must be dry to insure that cartons will not absorb moisture and collapse.

MAINTENANCE AND INSTALLATION

1. No one shall be permitted to install, adjust, maintain, replace or handle high vacuum tubes until he/she has reviewed this CEM.
2. When cathode ray tubes are received, transported, or otherwise moved from area to area, they should be completely enclosed in their original shipping carton and sealed.
3. To minimize the hazard from flying debris, safety glasses and long sleeve garments must be worn.
4. Tubes under vacuum will not be permitted to remain out of their carton unless they are under test or inspection.
5. Avoid scratching or bumping any part of the tube because this may weaken the glass and possibly cause it to implode.
6. Prior to removal of any high vacuum tube, discharge all stored potential which may exist on the tube's anode button or base socket pins and the capacitor in the high voltage supply. (NOTE: Some cathode ray tubes contain a conductive coating on both the inside and outside surfaces to form a capacitor. Within some tubes, a second capacitive charge builds up following the original discharge. It is, therefore, important to discharge each tube a second time immediately before removal.)
7. Do not handle cathode ray tubes by the neck alone. The neck is the weakest part of the tube and is easily broken. Always handle tubes with two hands. If the CRT is shipped with a lifting strap, this strap should be used for the removal of a tube from, and placement of a tube into, the shipping container.
8. When inserting or removing tubes from equipment, they must be supported by the large end while carefully guiding the neck in or out of position. The lifting strap, if present, can be used in this process.
9. Avoid placing the tubes on a table or bench when there is any possibility of the tube rolling. If it is necessary to place a tube anywhere except in its special carton, a piece of felt or other soft material should be placed under it to prevent scratching the glass. Place larger tubes vertically on their faces, and not on their sides to prevent the possibility of rolling.
10. When removing a tube from equipment, it should be enclosed in its shipping container as soon as possible to reduce the chance of breaking. Cathode ray tubes should be placed in the carton with the large face end up and the neck down. Be sure that the weight of the tube is not resting on the neck. The container should be sealed securely with strong tape and, to prevent tipping, turned over so the tube is positioned face down.

DISARMING CATHODE RAY TUBES

Field personnel should not disarm cathode ray tubes. Tubes will be disarmed and disposed of in accordance with existing Environmental Protection Agency requirements at the plant of return or established disposal site.

DISPOSAL OF CATHODE RAY TUBES

Return CRT's to the branch office. Instructions for the disposal of cathode ray tubes are available in FE I/D letter 081-021. In the near future, the same information will be available in a CSD Safety/Health Reference booklet which will be distributed to all CSD Branch Offices.

10 SAFETY 10-20-82

SUBJECT: GROUND INDICATOR, P/N 9900453

The Ground Indicator, P/N 9900453, may render a false sense of security in some situations. Therefore, the use of the tool should be discontinued.

Use a meter when it is necessary to check a receptacle. (Reference "Electrical Safety Handbook, S229-8124.")

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453 SERVICE INFORMATION

4-8-81

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: Platen Detent – Interference

A limited number of early production "Selectric" IIIs were manufactured with a right front paper feed eccentric adjusting screw (22-250) which is longer than the present design. The long screw may interfere with the platen detent arm (20-21), causing index failures. If this condition is found, replace with present production screw (22-250).

MACHINES AFFECTED: Below approx. S/N: Type 6701 — 0000095; Type 6702 — 1003567; Type 6703 — 2004383; Type 6704 — 3000761; Type 6705 — 4038927.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

454 SAFETY

4-8-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Motor And Drive Double Insulation System

PURPOSE: Inform the field of the safety exposure to the Customer Engineer in the Motor And Drive Double Insulation System.

SAFETY INFORMATION: The Double Insulation System is designed to protect the customer from possible electrical shock. This is accomplished by isolating all hazardous voltage by at least two separate and unrelated levels of insulation (Figure 1). The Double Insulation System does not fully protect the Customer Engineer. The possibility of an electrical shock is increased because there is only one level of insulation between the Customer Engineer and the live parts of the motor when the covers are removed and the CE is servicing the machine in this area. The motor shell is not double insulated, but has only basic insulation as indicated in (Figure 1) 1st level of insulation. The second level of insulation consists of the motor mounts (11-22).

CEs must be aware that on 2 wire double insulated machines, an insulation fault in the motor will result in a shock if the motor shell is touched along with a ground source.

SAFETY PRECAUTION: Turn the motor switch off prior to touching the motor shaft or shell. Do not hold motor in your hand to test. (To check for a faulted motor, make a resistance check between the motor shell and the motor leads, using your Volt-Ohm Meter. A reading of infinity indicates good insulation.)

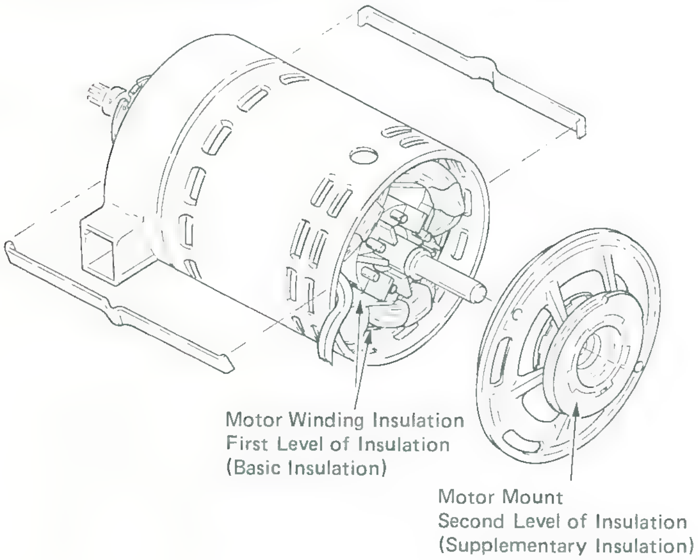
Motor Winding Insulation
First Level of Insulation
(Basic Insulation)
Motor Mount
Second Level of Insulation
(Supplementary Insulation)

Figure 1

NOTE: On 3 wire machines, if the ground strap is not present between the motor and frame (or is not properly installed), the risk of a shock is somewhat higher than with Double Insulated machines because the machine frame is grounded.

Use Service Code 33

This CEM expires 4-8-82

455 SAFETY

5-20-81

Type(s): 6704, 6705

(Revised) 2-10-82

SUBJECT: Possible CE Safety Exposure – Line Cord, Motor Pulley Contact

PURPOSE: **PRECAUTION:** The motor shell could become live (i.e., line voltage present on the motor shell) on dual pitch "Selectric" IIIs manufactured prior to the S/Ns listed below. The length of the line cord from the white strain relief to the transformer may be excessive. The added length can allow the cord to contact the motor pulley/shaft. This may wear the line cord insulation, resulting in the shell becoming live.

NOTE: This condition is an exposure to the CE only, the customer is protected by the second level of insulation (See "Selectric" CEM No. 454).

SAFETY CORRECTIVE ACTION: Check for this condition on the NEXT SERVICE CALL, **BEFORE** performing any other service, as follows:

1. Unplug the line cord and remove the covers.
2. Check for damage to the line cord insulation in the area indicated and replace it if damage is evident.
3. Install wire tie (11-606) as shown in Figure 1.
4. Reapply power and check for proper machine operation.

NOTE: All machines within the specified S/N range must be checked for this condition on the next service call. The wire tie must be installed on **ALL** machines. (The wire tie is plant installed on machines above the S/N listed.)

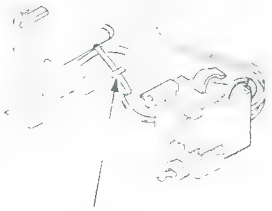

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
11	52	1336439	Line Cord 8 Ft. SE III DP	1	4.55
	52	1336440	Line Cord 13 Ft. SE III DP	1	6.45
	606	1245622	Wire Tie	1	.07

MACHINES AFFECTED: Below approx. S/N: Type 6704 — 3006980, Type 6705 — 4184311, Type 6705 — 5124991.

Use Service Code 33

This CEM Expires 5-20-82

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456 RELIABILITY

8-26-81

Type(s): 6705

(Revised) 1-27-82

SUBJECT: Cover – Defective Paint

PURPOSE: Small amounts of paint may come off with the packing tape when the tape is removed at installation of some "Selectric" IIIs.

SYMPTOM: This condition is most likely to occur on the left side of the machine near the seam between the center and bottom cover. The problem is limited to covers painted in Raven Black, Topaz Bronze and Marlin Blue.

SOLUTION: Use touch up paint (05-500, 501) or replace cover(s) as required.

MACHINES AFFECTED: Between approx. S/N: Type 6705, 5048500-5083310.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 33

This CEM Expires 1-27-83

457 SERVICE INFORMATION

7-15-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Cycle Clutch Spring – Redesigned

The extensions on the cycle clutch spring (23-404) have been changed to make them both the same length. The cycle clutch spring can now be installed with either extension to the left.

Parts Information: Existing field stocks will be used until depleted.

458 SERVICE INFORMATION

7-15-81

Type(s): 6126

SUBJECT: Rotary Backspace Bellcrank Stop – Level 1 Field Fix

The backspace bellcrank downstop (24-116) can be installed on a machine with all steel transport when the bellcrank upstop lug on the Level 1 backplate is weak or broken.

PROCEDURE:

1. Remove two L-1 backplate mounting screws (24-14 and 24-113).
2. Using a No. 22 bit, drill the threads out of the holes in the power frame from which the screws were removed.
3. Install the bellcrank downstop as shown in Figure 1 with two screws (24-114 and 24-117) and one washer (24-119). Use Level 2 adjustments to check backspace motion.

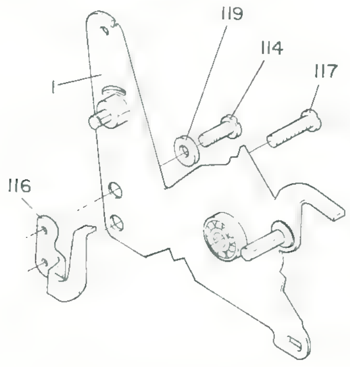


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
24	114	322065	Screw, Downstop	1	—
	116	1205943	Stop, Down	1	—
	117	1164581	Screw	1	—
	119	1090622	Washer	1	—

459 SERVICE INFORMATION

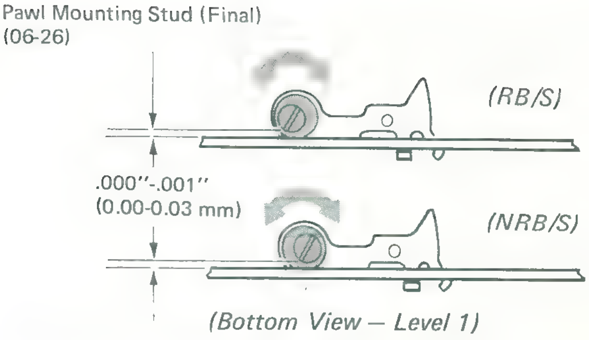
7-15-81

Type(s): 6121, 6126

(Revised) 1-27-82

SUBJECT: Pawl Mounting Stud

Frame 119 of APM 241-5939-3 is incorrect. On NRB/S machines, the eccentric screwhead should be to the left and on RB/S machines, the eccentric screwhead should be to the right. This correction is shown in Figure 1. Mark this change in your APM.



Use Applicable Service Code.

Figure 1

460 SERVICE INFORMATION

7-15-81

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT. Escapement Pawl Mounting Stud And Spacer (RB/S) – Redesigned

The Level 2 escapement pawl mounting stud (07-5) and spacer (07-3) have been redesigned to eliminate the need for the former level spacer (P/N 1204370) and shim (P/N 1290994).

When replacement of either the stud or the spacer is required on machine below the specified S/N range(s), replace both parts with the new level parts and discard the shim.

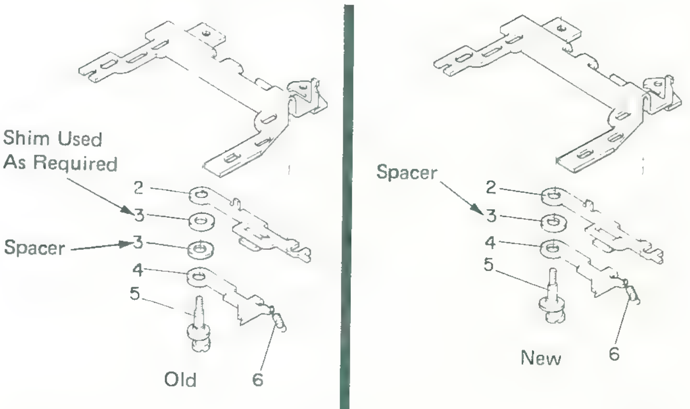


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
07	3	1256873	Spacer	1	—
	5	1256619	Stud, Pawl, L-2	1	—

MACHINES AFFECTED: S/N: (8X3) 5289139, (8X5) — 6868874, 6701 — 0001239, 6702 — 1003697, 6703 — 2005463, 6704 — 3003246, 6705 — 4110573.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

461 RELIABILITY

7-15-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Torque Limiter Hub – Defective

PURPOSE: Some machines were manufactured with an excessive taper on the shoulder portion of the torque limiter hub (25-3) (Figure 1).

SYMPTOM: The taper will result in the torque limiter spring (25-9), torque limiter arbor (25-11), CR spring (25-13) and CR pinion being driven to the right into the "C"-clip during machine operation. A binding condition or premature wear of these parts can occur.

SOLUTION: When experiencing this symptom, replace the torque limiter (25-3). Examine the other affected parts and replace as necessary.

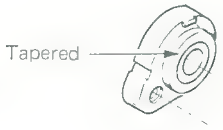


Figure 1

Continued

CEM Customer Engineering Memorandum

"Selectric" Typewriter

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418 SAFETY 3-12-80

Type(s): 6126

SUBJECT: Motor Label

On Canadian-built 895 machines there is a possibility of the motor label adhesive failing. The label could curl up and be near or touching the tab rack, reducing the effectiveness of the protective insulation system. If this condition exists, remove the label. It is not necessary to replace the label.

SAFETY PRECAUTION:

NOTE: Removal of the label may cause the motor to shift position. Recheck motor position.

MACHINES AFFECTED: S/N between approx. 4514800 — 4864161.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

419 SERVICE INFORMATION 3-12-80

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Top Cover Latch — Shock Mounts

SYMPTOM: Top cover vibrates and cannot be satisfactorily adjusted to eliminate the problem.

SOLUTION: Install the top cover latch shock mounts (05-82) (Figure 1).

Adjust the latches so that the shock mounts are completely compressed.

Note: This is done to ensure that the customer will not have difficulty in lifting the top cover.

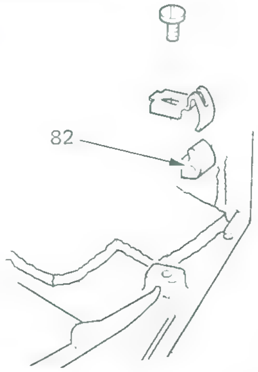

Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
05 82	6519448	Shock Mount, Top Cover	2	.02

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Applicable Service Code

420 SERVICE INFORMATION 3-12-80 (Revised) 12-16-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Bellringer Bellcrank — Redesigned

The paddle portion of the bellringer bellcrank (9-106) has been lengthened and an extension added to prevent it from slipping over top of the linelock bail (09-80).

This bellcrank will also stop unwanted correcting tape feed when typing through the right hand margin, F/N 241-5114, item 3, page 27.

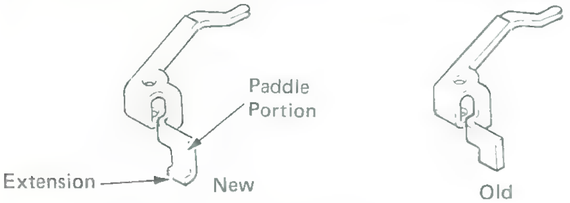

Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
10 8	1256662	Bellringer Bellcrank	1	.30
9 106	1256666	Bellringer Bellcrank	1	

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

421 SERVICE INFORMATION 5-7-80

Type(s): 6121, 6126 (Revised) 12-17-80

SUBJECT: Torque Limiter Hub And Spring Clamp — Redesigned

PURPOSE: These parts were redesigned to reduce torque limiter spring (25-9) breakage and the loosening or shifting of the clamp (25-5). An extension has been added to the tail of the torque limiter spring clamp (25-5), which will fit under a lug added to the torque limiter hub (25-3).

SOLUTION: Replace the hub and clamp when necessary. The redesigned parts are compatible with previous level parts.

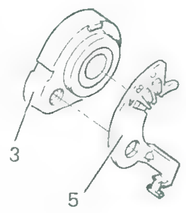

Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
25 3	1256545	Hub	1	1.00
5	1256546	Clamp	1	.10

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Old level parts will no longer be available.

Estimated Installation Time: .2 Hr.

422 SERVICE INFORMATION 5-7-80

Type(s): 6701, 6702, 6703, 6704, 6705 (Revised) 12-17-80

SUBJECT: Announcement — IBM "Selectric" III Typewriter

All detailed service information is contained in the "Selectric" III Typewriter Service Manual Supplement. The following is a list of the design modifications and features of the "Selectric" III Typewriter:

1. Multiple copy control lever removed.
2. New platen knobs.
3. New margin set levers and indicators.
4. See-through margin scale for single pitch models.
5. Lighted margin scale for dual pitch models.
6. Combination page-end indicator and paper support.
7. 54-tooth ratchet standard on all models.
8. New design for optional soundhood.
9. External paper bail control lever.
10. Keyboard arrangements for 92, 94 or 96 characters (92-character standard) — no field conversions.
11. 96-character typehead (compatible with IBM Electronic Typewriters).
12. New style keybuttons (similar to IBM Electronic Typewriters).
13. New cover design.

The machine identification number, on the left side of the power frame, has 13 digits. The numbers are used to provide the following information:

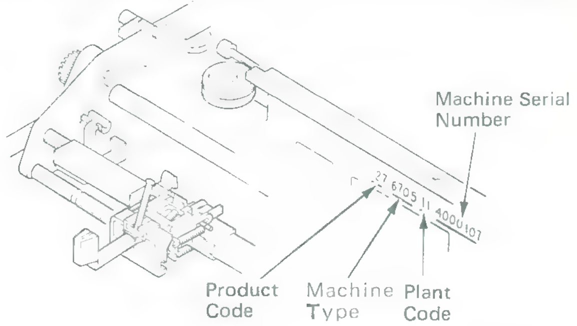

Figure 1

MODEL	MACHINE TYPE
13" Single Pitch Fabric	6701
13" Single Pitch Non-Correcting	6702
15" Single Pitch Correcting	6703
13" Dual Pitch Correcting	6704
15" Dual Pitch Correcting	6705

(Continued)

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(CEM 422 Continued)

RECOMMENDED PARTS INVENTORY (RPI)

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	333	1303501	Tilt Ring Asm.	1	25.25
	415	1254802	Socket, Lower Ball	1	2.60
05	141	1254495	Brkt. Erase Table	1	.60
10	100	1254997	Margin Pointer	2	.10
	107	1304140	Carrier Pointer D.P.	1	.55
	107	1254690	Carrier Pointer S.P.	1	.40
	119	1303102	Lamp	1	3.10
11	602	1249875	Connector	1	.15
30	141	1254900	Brkt. Erase Table, L. (S.R.)	1	1.05
	166	1254899	Brkt. Erase Table, R. (S.R.)	1	1.05

The "Selectric" Adjustment Parts Manual (F/N 241-5939) should be used with the "Selectric" Service Manual Supplement (F/N 241-6176) to service the "Selectric" III Typewriter.

Call reporting information for the "Selectric" III is the same as for "Selectric" and "Selectric" II Typewriters. This information is found in the CEARS Handbook (F/N Z241-6286).

423 SAFETY 5-7-80

Type(s): 6701, 6702, 6703, 6704, 6705 (Revised) 12-17-80

SUBJECT: Transformer Housing And Line Cord Plate — Wire Tie

PURPOSE: Early level dual pitch machines have a wire tie (11-606) to hold the line cord plate (11-600) and transformer housing (11-601) in place during shipment. If it is necessary to remove the wire tie to service the machine, the wire tie need not be replaced. However, if the transformer housing has a **BLACK** line cord plate (11-600), it **MUST** be replaced with a **GRAY** line cord plate (11-600) which has additional lugs to hold it in place.

Newer level machines have the **GRAY** line cord plate.

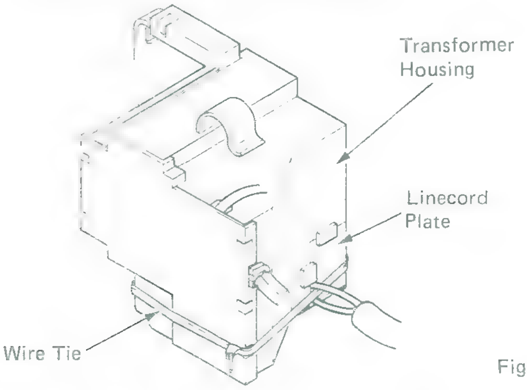


Figure 1

MECH/REF.		PART NO.	DESCRIPTION	QTY.	PRICE
11	600	1304051	Line Cord Plate, Gray	1	.20

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hrs.

Use Service Code 33

This CEM Expires 9-10-81

424 SERVICE INFORMATION

5-21-80
(Revised) 12-17-80

Type(s): 6121, 6126, 6701, 67[illegible], 6703, 6704, 6705

SUBJECT: Paper Bail Arm Screws — Redesigned

Self-locking material has been added to the threads of the paper bail arm screws (22-02) (Figure 1). This will prevent loosening of the screws.

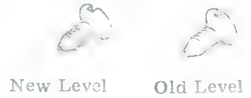


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
22	2	1256661	Screw	1	.05

425 SERVICE INFORMATION

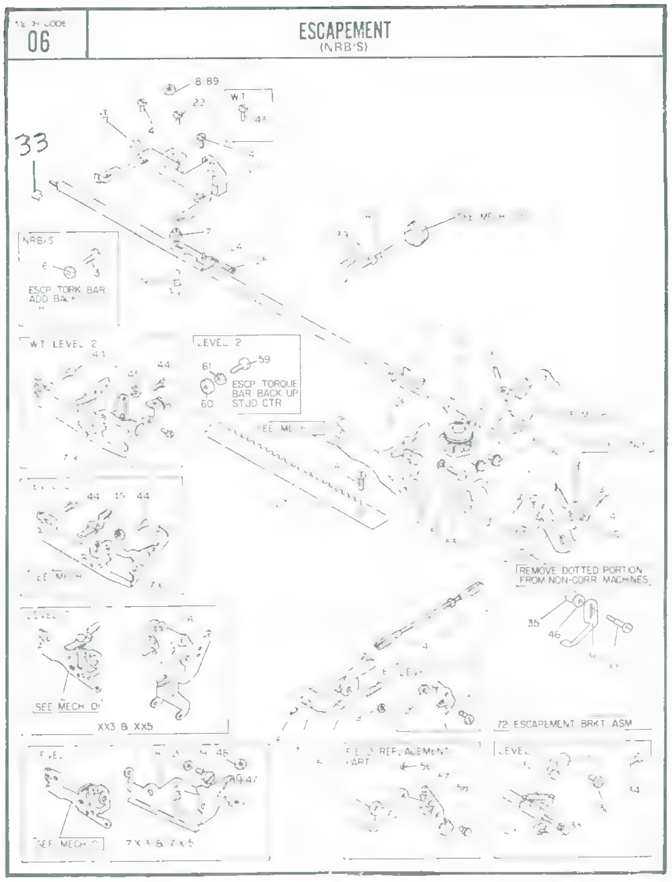
6-18-80

Type(s): 6121, 6126

SUBJECT: APM Correction — Escapement Torque Bar Retainer Clip

The left-hand escapement torque bar retainer clip (06-33) is not shown in the APM (241-5939).

Mark this change in your APM.



426 SERVICE INFORMATION

6-18-80
(Revised) 12-17-80

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Backspace Driver Mounting Stud — B/M

Backspace failures due to a broken driver mounting stud may be corrected using the backspace driver mounting stud B/M.

INSTALLATION PROCEDURE

1. Remove driver mounting stud from backplate by tapping lightly.
2. Remove the "C" clip, washer, driver, pitch cam (disconnect pitch cable), and pitch cam spring from the stud.
3. Insert the new stud (24-155) in the pitch cam spring, pitch cam (connect pitch cable) and driver.
4. Install washer and "C" clip on the front of the stud.
5. Install stud through the hole in the backplate and secure with washer and nut (Figure 1).

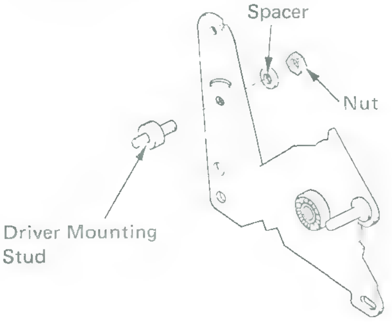


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
24	154	1279024	Stud B/M (Contains Ref. 155, 156 And 157)	1	2.85
	155	1279023	Stud	1	2.50
	156	1142264	Nut	1	.10
	157	257984	Washer	1	.04

454 SAFETY 4-8-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Motor And Drive Double Insulation System

PURPOSE: Inform the field of the safety exposure to the Customer Engineer in the Motor And Drive Double Insulation System.

SAFETY INFORMATION: The Double Insulation System is designed to protect the customer from possible electrical shock. This is accomplished by isolating all hazardous voltage by at least two separate and unrelated levels of insulation (Figure 1). The Double Insulation System does not fully protect the Customer Engineer. The possibility of an electrical shock is increased because there is only one level of insulation between the Customer Engineer and the live parts of the motor when the covers are removed and the CE is servicing the machine in this area. The motor shell is not double insulated, but has only basic insulation as indicated in (Figure 1) 1st level of insulation. The second level of insulation consists of the motor mounts (11-22).

CEs must be aware that on 2 wire double insulated machines, an insulation fault in the motor will result in a shock if the motor shell is touched along with a ground source.

SAFETY PRECAUTION: Turn the motor switch off prior to touching the motor shaft or shell. Do not hold motor in your hand to test. (To check for a faulted motor, make a resistance check between the motor shell and the motor leads, using your Volt-Ohm Meter. A reading of infinity indicates good insulation.)

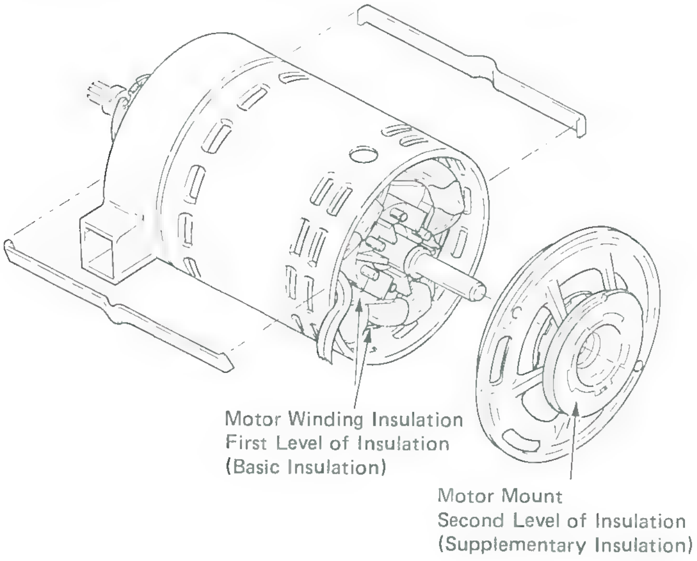

Motor Winding Insulation
First Level of Insulation
(Basic Insulation)
Motor Mount
Second Level of Insulation
(Supplementary Insulation)

Figure 1

NOTE: On 3 wire machines, if the ground strap is not present between the motor and frame (or is not properly installed), the risk of a shock is somewhat higher than with Double Insulated machines because the machine frame is grounded.

455 SAFETY 5-20-81

Type(s): 6704, 6705 (Revised) 10-7-81

SUBJECT: Possible CE Safety Exposure – Line Cord, Motor Pulley Contact

PURPOSE: **PRECAUTION**: The motor shell could become live (i.e., line voltage present on the motor shell) on dual pitch "Selectric" IIIs manufactured prior to the S/Ns listed below. The length of the line cord from the white strain relief to the transformer may be excessive. The added length can allow the cord to contact the motor pulley/shaft. This may wear the line cord insulation, resulting in the shell becoming live.

NOTE: This condition is an exposure to the CE only, the customer is protected by the second level of insulation (See "Selectric" CEM No. 454).

SAFETY CORRECTIVE ACTION: Check for this condition on the NEXT SERVICE CALL, **BEFORE** performing any other service, as follows:

1. Unplug the line cord and remove the covers.
2. Check for damage to the line cord insulation in the area indicated and replace it if damage is evident.
3. Install wire tie (11-606) as shown in Figure 1.
4. Reapply power and check for proper machine operation.

NOTE: All machines within the specified S/N range must be checked for this condition on the next service call. The wire tie must be installed on **ALL** machines. (The wire tie is plant installed on machines above the S/N listed.)

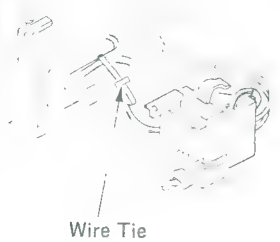
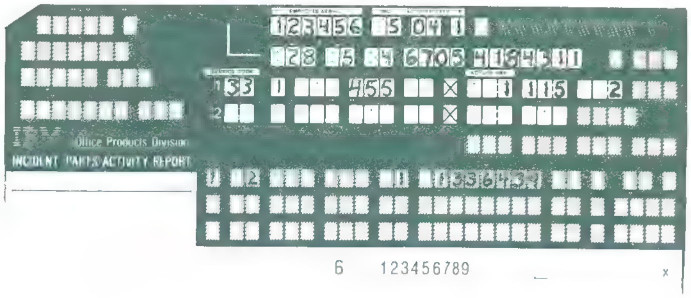


Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
11 52	1336439	Line Cord 8 Ft. SE III DP	1	4.55
52	1336440	Line Cord 13 Ft. SE III DP	1	6.45
606	1245622	Wire Tie	1	.07

MACHINES AFFECTED: Below approx. S/N: Type 6704 — 3006980, Type 6705 — 4184311, Type 6705 — 5124991.

REPORTING: **All** Branch Offices are to record this activity on an **I/PAR**, entering CEM No. 455 in the part ref./minor block. Record part usage of the line cord, if replaced. Do not record usage of the wire tie (Figure 2).


Office Products Division
INCIDENT PARTS ACTIVITY REPORT

123456 5 04 1

28 5 4 6705 4184311

1 33 1 455 ☒ 1 115 2

2 ☒

1 2 1336439

6 123456789 x

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456 RELIABILITY

8-26-81

Type(s): 6705 (Revised) 1-27-82

SUBJECT: Cover – Defective Paint

PURPOSE: Small amounts of paint may come off with the packing tape when the tape is removed at installation of some "Selectric" IIIs.

SYMPTOM: This condition is most likely to occur on the left side of the machine near the seam between the center and bottom cover. The problem is limited to covers painted in Raven Black, Topaz Bronze and Marlin Blue.

SOLUTION: Use touch up paint (05-500, 501) or replace cover(s) as required.

MACHINES AFFECTED: Between approx. S/N: Type 6705, 5048500-5083310.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 33

This CEM Expires 1-27-83

457 SERVICE INFORMATION

7-15-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Cycle Clutch Spring – Redesigned

The extensions on the cycle clutch spring (23-404) have been changed to make them both the same length. The cycle clutch spring can now be installed with either extension to the left.

Parts Information: Existing field stocks will be used until depleted.

458 SERVICE INFORMATION

7-15-81

Type(s): 6126

SUBJECT: Rotary Backspace Bellcrank Stop – Level 1 Field Fix

The backspace bellcrank downstop (24-116) can be installed on a machine with all steel transport when the bellcrank upstop lug on the Level 1 backplate is weak or broken.

PROCEDURE:
1. Remove two L-1 backplate mounting screws (24-14 and 24-113).
2. Using a No. 22 bit, drill the threads out of the holes in the power frame from which the screws were removed.
3. Install the bellcrank downstop as shown in Figure 1 with two screws (24-114 and 24-117) and one washer (24-119). Use Level 2 adjustments to check backspace motion.

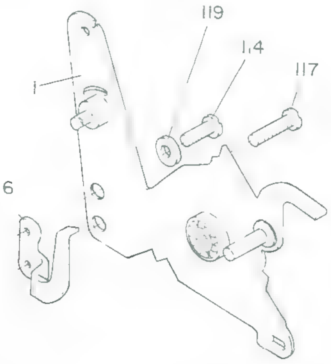


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
24	114	322065	Screw, Downstop	1	—
	116	1205943	Stop, Down	1	—
	117	1164581	Screw	1	—
	119	1090622	Washer	1	—

459 SERVICE INFORMATION

7-15-81

Type(s): 6121, 6126 (Revised) 1-27-82

SUBJECT: Pawl Mounting Stud

Frame 119 of APM 241-5939-3 is incorrect. On NRB/S machines, the eccentric screwhead should be to the left and on RB/S machines, the eccentric screwhead should be to the right. This correction is shown in Figure 1. Mark this change in your APM.

Pawl Mounting Stud (Final)
(06-26)

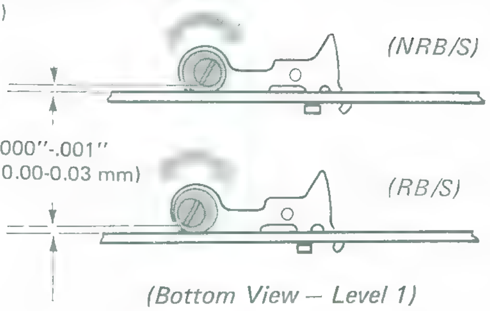


Figure 1

Use Applicable Service Code.

460 SERVICE INFORMATION

7-15-81

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT. Escapement Pawl Mounting Stud And Spacer (RB/S) – Redesigned

The Level 2 escapement pawl mounting stud (07-5) and spacer (07-3) have been redesigned to eliminate the need for the former level spacer (P/N 1204370) and shim (P/N 1290994).

When replacement of either the stud or the spacer is required on machine below the specified S/N range(s), replace both parts with the new level parts and discard the shim.

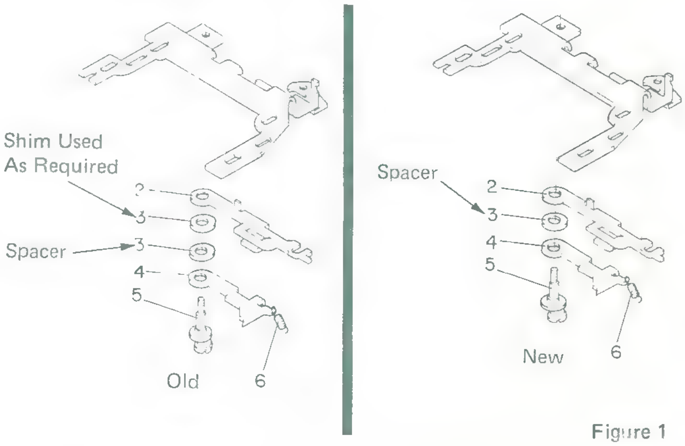


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
07	3	1256873	Spacer	1	—
	5	1256619	Stud, Pawl, L-2	1	—

MACHINES AFFECTED: S/N: (8X3) 5289139, (8X5) — 6868874, 6701 — 0001239, 6702 — 1003697, 6703 — 2005463, 6704 — 3003246, 6705 — 4110573.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

461 RELIABILITY

7-15-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Torque Limiter Hub – Defective

PURPOSE: Some machines were manufactured with an excessive taper on the shoulder portion of the torque limiter hub (25-3) (Figure 1).

SYMPTOM: The taper will result in the torque limiter spring (25-9), torque limiter arbor (25-11), CR spring (25-13) and CR pinion being driven to the right into the "C"-clip during machine operation. A binding condition or premature wear of these parts can occur.

SOLUTION: When experiencing this symptom, replace the torque limiter (25-3). Examine the other affected parts and replace as necessary.

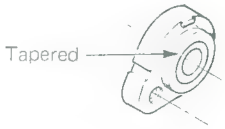


Figure 1

(Continued)

(CEM No. 461 Continued)

MACHINES AFFECTED: Approx S/N: Type 6121 (Model 7X1) 0918226-0955085; Type 6126 (Model 8X3) 5261152-5295026; Type 6126 (8X5) 6777398-6882781; Type 6126 (Model 895) 4960127-4993029; Type 6701, 0000159-0004723; Type 6702, 1003579-1004433; Type 6703, 2004488-2007464; Type 6704, 3000999-3005259; Type 6705, 4045275-4158376; Type 6705, 5009200-5066000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Service Code 33

This CEM Expires: 4-1-82

462 SERVICE INFORMATION

7-15-81

Type(s): 6704, 6705

SUBJECT: PN/PL Correction

The margin pointer (10-100) should be P/N 1254997. Mark this change in your PN/PL.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
10	100	1254997	Margin Pointer — Dual Pitch	1	—

463 SERVICE INFORMATION

8-26-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Screws Changed In Cycle Clutch Bracket

CSI INFORMATION: The screws (21-228) that mount the bracket (21-532) that holds the guide assembly (21-530) have been lengthened. This change was made to eliminate the possibility of the screws stripping.

NOTE: On machines that have this change, there may be some interference when using the Hooverometer to make the "power on" adjustments. The red handle brush (P/N 0003701) or any other suitable tool can be used on these machines.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

464 SERVICE INFORMATION

8-26-81

Type(s): 6126, 6703, 6704, 6705

(Revised) 1-27-82

SUBJECT: Correcting Lift and Feed Actuator Stud

INFORMATION: The correcting lift and feed actuator stud (26-54) may be replaced with P/N 1466537 currently used in Mag Card. This stud has a slotted head for easier installation and removal.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
26	54	1466537	Stud	1	.40

465 SERVICE INFORMATION

8-26-81

Type(s): 6121, 6126

SUBJECT: A-Frame Replacement On Pre-Eccentric Overthrow Stop Machines

The A-frame asm. (22-228) is now available with eccentric index overthrow stop only. When replacing the A-frame asm. on pre-eccentric overthrow stop machines, it may be necessary to remove some material from the power frame with a file or other suitable tool in the area directly below the eccentric overthrow stop. This eliminates interference with proper platen height adjustment on the right side.

CAUTION: Use shop towels or other protection to keep metal filings away from other mechanisms.

466 SERVICE INFORMATION

8-26-81

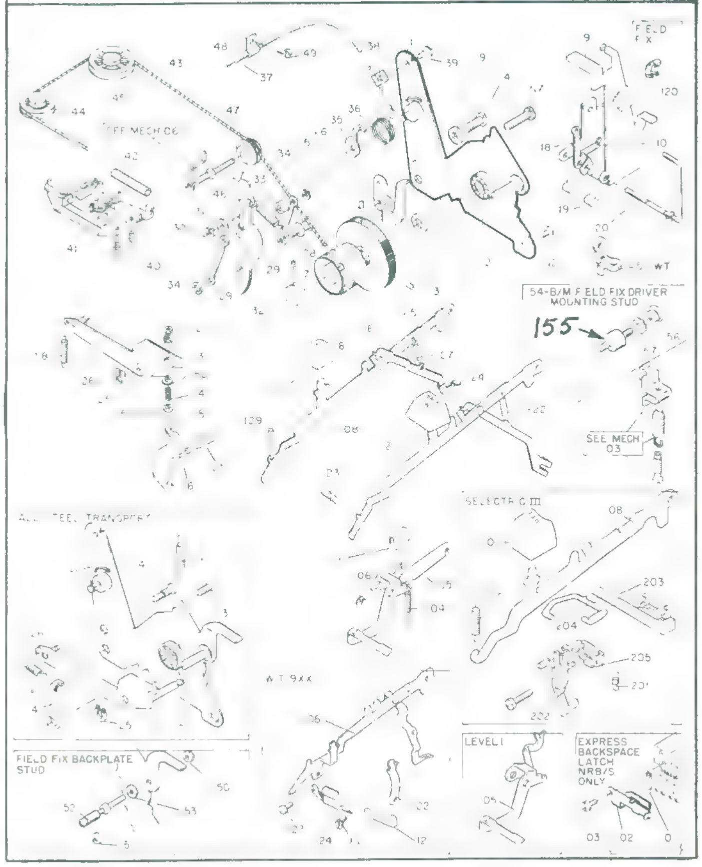
Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: APM Correction — Backspace Driver Mounting Stud

PURPOSE: The reference number for the field fix backspace driver mounting stud is incorrect. It should be part reference 24-155. Mark this correction in your APM.

ROTARY BACKSPACE/EXP. BACKSPACE

MECH. CODE 24



467 SERVICE INFORMATION

10-7-81

Type(s): 6701, 6702, 6703, 6704, 6705

(Revised) 1-27-82

SUBJECT: Court Reporter Element — Underscore

PURPOSE: Some 96 character Courier 10 Court Reporter elements (P/N 1352030) were manufactured with the wrong underscore.

SYMPTOM: When used on 9 pitch machines the underscore will resemble dashes instead of a continuous line. (The element will function normally on 10 pitch machines.)

SOLUTION: Replace the element.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	180	1352030	Element, Courier 10 Court Reporter	1	—

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 18

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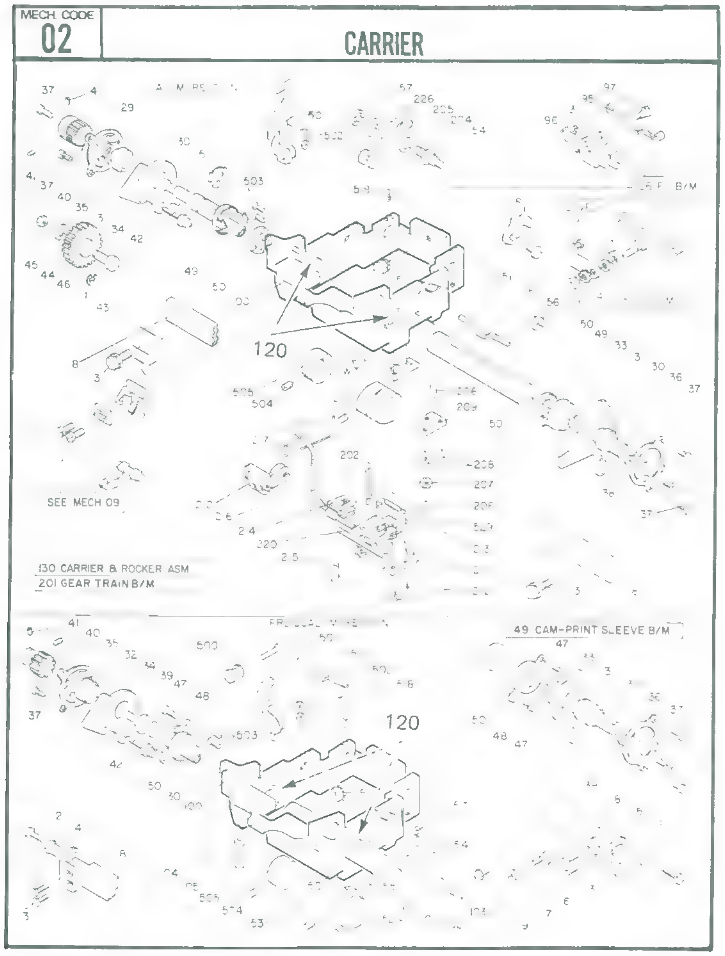
468 SERVICE INFORMATION

10-7-81
(Revised) 1-27-82

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Carrier Bearing – Reference Number Added To APM

A part reference number (02-120) has been assigned to the carrier bearing for CALL REPORTING PURPOSES ONLY (See Figure 1). Note this change in your APM (241-5939).



469 SERVICE INFORMATION

10-7-81
(Revised) 12-2-81

Type(s): 6121

SUBJECT: Margin Set Levers

PURPOSE: The margin set levers (09-15) and set lever assemblies (09-125) have been changed to metal to reduce breakage. The lever and asm. are compatible with current level margin stops (09-18, 35). Machines without current level stops below 7X1 — 4218186, 7X3 — 4859623, 7X5 — 4510354 must have the margin lever asm. (09-125) replaced.

NOTE: When replacing a plastic set lever or asm. with the metal lever, both levers should be changed to the metal lever.

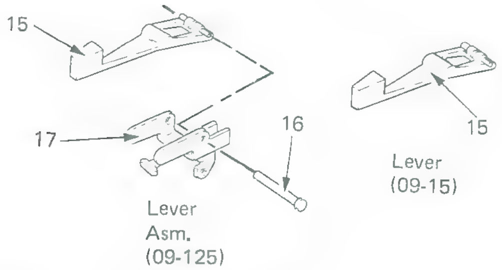


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
09	15	1256665	Margin Lever	1	1.20
	125	1256668	Margin Lever Asm.	1	2.90

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Plastic levers and assemblies will no longer be available. Present stock of the margin rack assemblies (09-150) will contain the plastic set levers until depleted.

Use Applicable Service Code

470 SERVICE INFORMATION

10-7-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Print Quality – Platen Height Adjustment

SYMPTOM: The platen cannot be adjusted low enough to get even top and bottom print. Check the platen height adjustment with the platen gauge. With the gauge installed and the platen adjusted for .030" (0.76 mm) clearance between the top of the platen and platen gauge, the platen should need only slight adjustment to get even top and bottom. If the platen height eccentrics require excessive adjustment downward for even top and bottom print, the yoke (02-520) could be the problem. The tilt detent slot may be off location.

NOTE: Check to be sure that related adjustments such as platen front to rear, platen latches, and carrier shoe are not contributing to the problem.

SOLUTION: If the platen height eccentrics do not provide sufficient adjustment range, one of the following corrective actions may be used.

"Selectric" and "Selectric" II prior to eccentric overthrow index pawl stop: **replace the yoke.**

"Selectric" and "Selectric" II with eccentric overthrow: Install B/M 1279505. This B/M includes new LH and RH platen supports (22-280, 291) which have been modified to allow the platen to be adjusted lower. The parts are color coded a gold tone for identification. Individual P/Ns for the LH and RH supports will not be made available. If replacement of the supports does not solve the problem, the yoke must be replaced.

"Selectric" III: **Replace the yoke** (02-520) (platen supports are not available as separate parts on "Selectric" IIIs).

NOTE: If yoke replacement is required, check print adjustments, fine alignment, and character selection adjustments, with emphasis on even side-to-side printing, skirt clearance, and homing. Also make sure that the carrier does not contact the feed rolls during carrier movement.

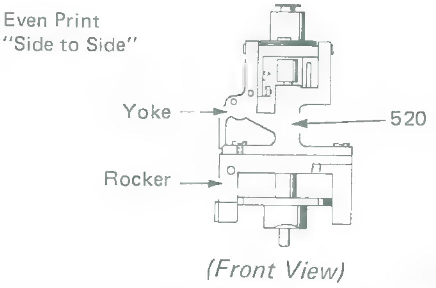


Figure 1

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

471 SERVICE INFORMATION

10-7-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Tilt Pulley Bushing Breaking

(Revised) 12-2-81

The tilt pulley bushing (23-3) has been redesigned. The length of the bushing was increased to prevent it from breaking when tightening the nut (23-1).

NOTE: A washer (23-17) was installed on machines (as shown in Figure 1) within the specified serial number range as a temporary measure until the redesigned bushing became available. The washer is not required with the redesigned bushing and should be discarded if the new bushing is installed.

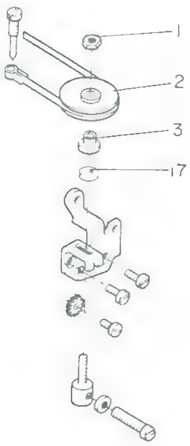


Figure 1

(Continued)

(CEM No. 471 Continued)

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	3	1256038	Bushing	1	.08

MACHINES AFFECTED: Between approx. S/N: Type 6121 (7X1) — 0949339 and 0972293; Type 6126 (8X3) — 5291541 and 5302254; Type 6126 (8X5) — 6874286 and 6904004; Type 6701 — 0003427 and 0006099; Type 6702 — 1003772 and 1008303; Type 6703 — 2005916 and 2015145; Type 6704 — 3003740 and 3009042; Type 6705 — 4136809 and 4235975.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Former level bushings are no longer available.

Use Applicable Service Code

472 SERVICE INFORMATION

10-21-81

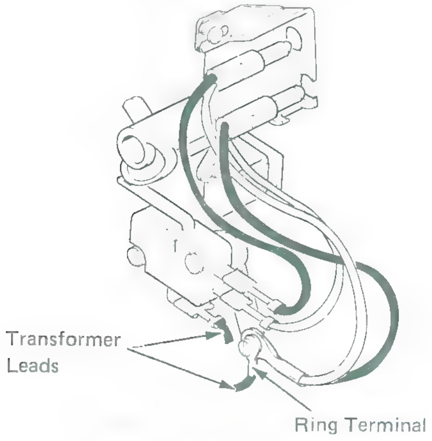
Type(s): 6704, 6705

SUBJECT: Transformer Motor

A new motor has been released that includes a **built-in transformer** to provide margin lamp voltage for "Selectric" III 115V — 60Hz dual pitch machines.

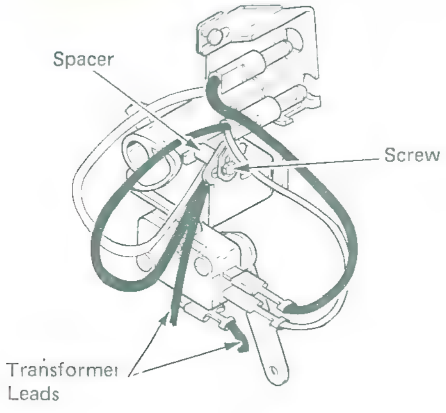
The method of connecting the secondary wiring at the margin light switch plate (10-109) has also been changed. Figure 1 shows the old method of connection and Figure 2 shows the new. The switch plate will be redesigned as illustrated in Figure 3. The old plate will be used until stock is depleted but the wires will be connected as illustrated in Figure 2.

If a transformer motor is used as a replacement part, the new method of wiring (Figure 2) must be used. It is not necessary to change the wire connections on machines with the previous transformer (11-603).



Old

Figure 1



New

Figure 2

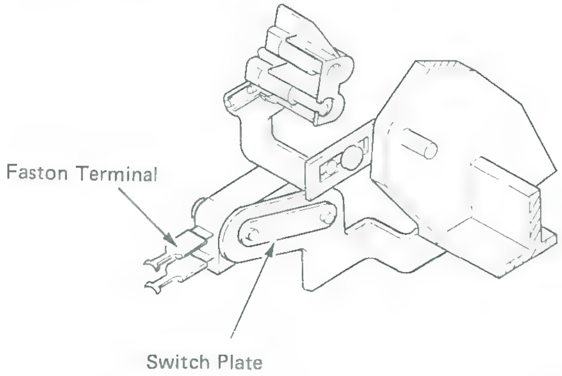


Figure 3

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
10	121	1336413	Screw, Long		.07
	123	1336772	Spacer		—
11	40	1304774	Transformer Motor		—
	83	1304713	Ring Terminal		.25
	88	5412817	Faston Terminal		.30

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

473 SERVICE INFORMATION

12-2-81

Model(s): 7XX, 8XX, 670X

SUBJECT: Platen Detent Arm And Roller 54 T — Redesigned

PURPOSE: The detent roller diameter has been reduced by .010" (0.25 mm) to increase the detenting force on the platen ratchet.

On machines without the new style detent arm, (except 7XX) the arm (20-21) roller (20-19) and clip (20-18) must be replaced together.

All non-eccentric detent arms (24, 27, 31, 36, 45, 48 and 54 tooth) will be used until depleted and replaced by eccentric detent arms.

All adjustments remain the same.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
20	18	219633	"C-"Clip		PP .03
	19	1256705	Roller — 54T		—
	21	1256706	Detented Arm — 54T		—
	21	1256707	Detent Asm.		—
	21	1256709	Detent Arm 54T (721)		—
	471	1290625	Detent (45T/48T)		1.25
	471	1290626	Detent 24T		.80
	471	1290627	Detent 27T		.60
	471	1290628	Detent 36T		3.60
	471	1290629	Detent 31T		6.00

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

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474 SERVICE INFORMATION

12-2-81

Type(s): 6701, 6703, 6704, 6705

SUBJECT: "Selectric" III Incorrect Machine Type Code

Due to a problem with the serializing process in Lexington, the power frames of approximately 4,000 "Selectric" IIIs have been stamped with incorrect machine type codes. All of these machines were stamped with machine type 6702 regardless of actual machine type.

A CEARS reporting error will occur if the incorrect machine type (i.e., 6702) is recorded on a CEARS document.

Lexington manufacturing corrected the majority of these errors prior to shipment by installing a black sticker with correct product, machine type, and plant of manufacture to the left of the machine serial number over the incorrect information.

Offices that received machines that were shipped before corrective action was taken have been notified and provided with stickers. If machines are found that have not been corrected or the original sticker did not adhere, more stickers can be obtained from Lexington Service Planning.

MACHINES AFFECTED: 6701, 0008395—0008611; 6703, 2017481—2018930; 6704, 3011246—3011589; 6705, 4258893—4299931.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

475 SERVICE INFORMATION

12-2-81

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: Top Cover Jammed – Sound Reduction Machines

If experiencing problems in lifting the top cover (30-151) on sound machines, check for excessive side-to-side motion of the hood latch on the RH hood bracket (30-133). The top cover latch (30-136) may have slipped off the RH side of the bracket (30-133) and jammed the cover. Washer (P/N 1091220) has been used in the plant to eliminate the problem and can be used if needed in the field. Install washer as shown in Figure 1.

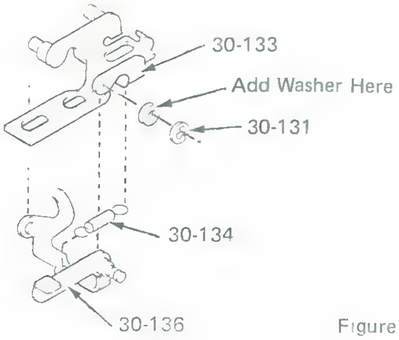


Figure 1

476 SERVICE INFORMATION

1-27-82

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: Page End Indicator – Removal Of Extension

If the customer requests removal of the extension (05-144) on the page end indicator, it can be removed by using a punch and hammer or other suitable tool to release the pin. Do not remove the entire indicator, and leave the metal prongs exposed.

NOTE: Because the page end indicator is a molded plastic part, sharp edges could occur. If the edges are noticeably sharp or rough, remove with file or stone or replace the indicator.

TIMELY INFORMATION PROGRAM

1-27-82

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Overbank Adjustment – Simplified

The following method may be used to facilitate making the overbank adjustment.

1. *Move the left hand margin away from the final stop (9-61, 10-17).*
2. *On dual pitch machines place the machine in the 12 pitch mode.*
3. *Backspace or carrier return the carrier into the left-hand margin.*
4. *Loosen the overbank guide mounting screw (9-7, 10-9), on duel pitch machines also loosen the margin rack gear screw(s) (10-26), allowing the margin rack and/or rail to come to rest.*
5. *Hold the overbank guide (9-57, 10-10) against the bracket (9-71, 10-13) and tighten the mounting screw.*
6. *Adjust the margin rack gear for .001"-.004" (0.03-0.10 mm) clearance on dual pitch machines.*
7. *Check for .000"-.003" (.000-0.08 mm) between the left hand margin and the carrier stop latch (9-5, 10-34).*

NOTE: The final margin stop, CR clutch unlatching, and/or the CR-TAB interlock adjustments may be affected and should be rechecked.

427 SERVICE INFORMATION

6-18-80

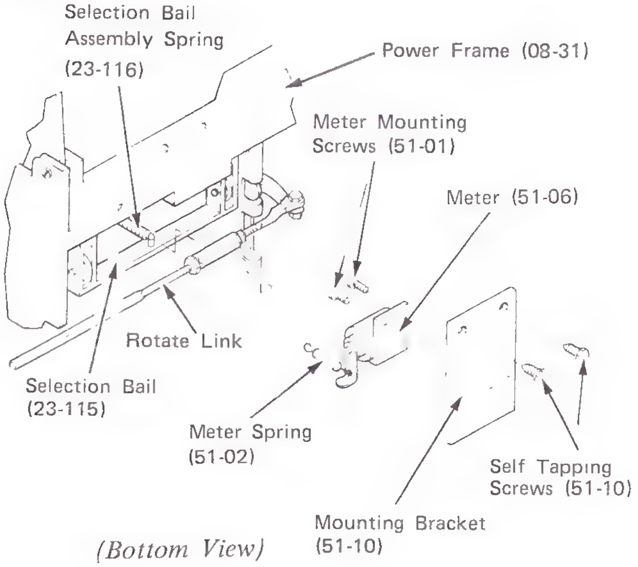
Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Stroke Counter – Redesigned (Revised) 10-6-82

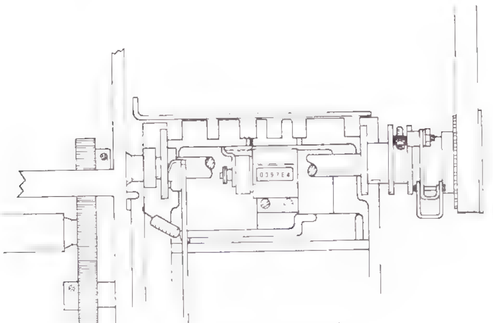
The "Selectric" stroke counter has been redesigned to mount on the bottom of the power frame as illustrated in Figure 1. A new field installable B/M (51-9) is available which contains the hardware and counter. The only ratio available for new installations is 120:1.

A limited number of 10:1 ratio counters [(51-6) P/N 1266728] remain available for replacement purposes on the previous level side mount B/M. These counters will be used until depleted. The 100:1 and 240:1 ratio counter for the previous level side mount will no longer be available. If replacement of an unavailable counter is required the 120:1 ratio B/M must be installed.

ADJUSTMENTS: Adjust the bracket or the counter front to rear so that the arm gets enough motion from the positive bail to advance the counter.



(Bottom View)



(Top View)

Figure 1

MECH/REF.	PART NO.	DESCRIPTION	QTY.	PRICE
51 6	1256689	Counter 120-1 (Bottom Mount)		
4	1256688	Bracket, New Style Mtg. All SE		
10	1138974	Screw, Self Tap		
2	1133664	Spring, New Style Mtg.		
8	1256691	Dust Shield 7 x 1 New Style Mtg.		
	1256690	Dust Shield 8XX, 670X New Style Mtg.		
9	1279037	B/M 721, Incl. Counter		
	1279036	B/M 8XX, 670X, Incl. Counter		

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .4 Hr.

Use Applicable Service Code

428 SERVICE INFORMATION

7-2-80
(Revised) 12-17-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Carrier Return – Uneven/Slow/Intermittent

SYMPTOM: Uneven or slow carrier return can be caused by failure of the carrier return shoe (03-502) to **fully engage** each of the last 2 to 3 coils on the right side of the pinion spring (25-13) (Figure 1).

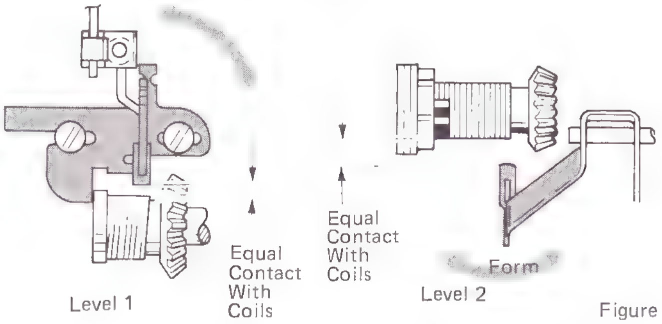


Figure 1

If the shoe is tilted to either side, so that greater pressure is applied to a single spring coil, increased wear will result on both the spring and on the return pinion (25-14) at that point. This leads to rapid loss of adjustment and need for aparts replacement more often. It is important that the shoe NOT apply greater pressure to the inside coils as this prevents the remaining outside coils from driving.

SOLUTION: If experiencing this problem, or when replacing parts in this area, check to ensure that the return shoe engages the coils of the return pinion spring evenly. When making the shoe overlap adjustment, be sure the shoe is not tilted and that shoe overlap does not exceed 3 coils. Best results will be achieved with 2 to 2 1/2 coil overlap.

429 RELIABILITY

7-2-80

Type(s): 6126 (Revised) 12-17-80

SUBJECT: Weak Cycle Clutch Drive/Contaminated Lubricant

PURPOSE: On some Correcting "Selectric" II Model 895s the cycle clutch lubricant may have metal contamination.

SYMPTOM: The contamination wears both the cycle clutch spring and cycle clutch pulley arbor, causing the clutch to slip.

SOLUTION: If experiencing weak cycle clutch drive and normal adjustments are not effective, do the following procedure:

1. Remove cycle shaft assembly and disassemble cycle clutch.
2. Thoroughly remove **all traces** of lubricant from cycle shaft assembly and cycle clutch pulley hub.
3. Install new cycle clutch spring, lubricate, and adjust.

Note: This procedure is effective in most cases. Do not replace the cycle clutch pulley hub unless these steps fail to correct the problem.

MACHINES AFFECTED: Between approx. S/N: Type 6126 (Model 895) – 4765000 to 4874000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .5 Hr.

Use Service Code 33

This CEM Expires 6-1-81

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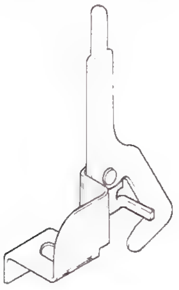
430 SERVICE INFORMATION

7-2-80

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

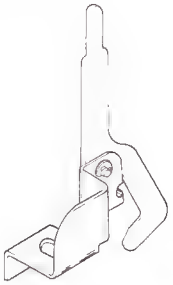
SUBJECT: Center Cover Bracket — Redesigned

The center cover latch bracket (05-43, 05-18) has been redesigned so that the latch lever (05-44, 05-16) can be installed to the inside of the bracket (Figure 1). This change gives more clearance between the lever and the foam, and makes it easier to unlatch the covers.



New Level

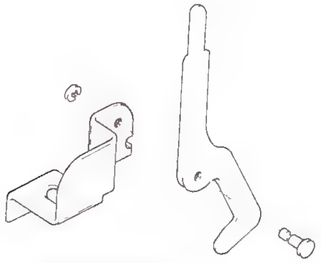
Figure 1



Old Level

Figure 2

Until the new bracket is available, manufacturing is using the old level parts (Figure 2) and reversing the lever (Figure 3). This method can also be used in the field if desired.



Modified Old Level

431 SERVICE INFORMATION

7-2-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Multiplying Lever Mounting Stud B/M

The multiplying lever is not included in B/M 25-324. This lever can be ordered under 25-250. Mark this reference number in your APM (25-250) and add the reference number and P/N to your PN/PL.

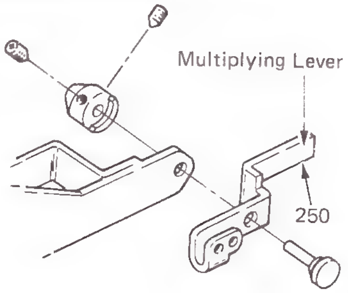


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	250	1128016	Multiplying Lever	1	.10

432 SERVICE INFORMATION

7-2-80

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: PN/PL Correction

The fan (11-400) (sound reduction machines only) should be P/N 1205958. Mark this change in your PN/PL.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
11	400	1205958	Fan, Sound Reduction Machines Only	1	1.40

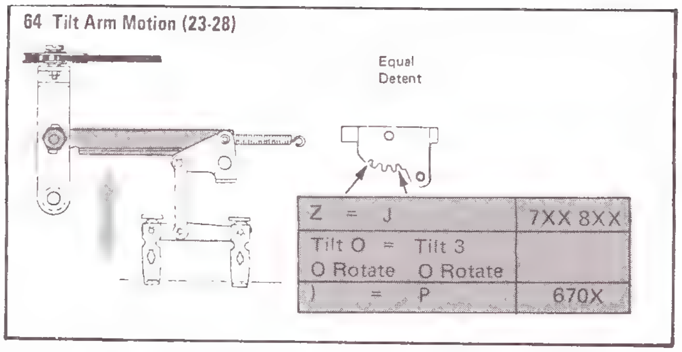
433 SERVICE INFORMATION

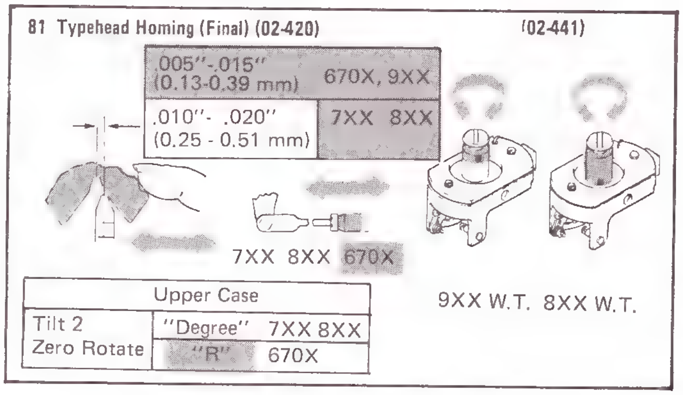
7-30-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: APM (F/N 241-5939) Correction

The shaded areas in the frames (64 and 81) below are corrections that should be marked in your APM.





434 SERVICE INFORMATION

9-10-80
(Revised) 3-25-81

Type(s): 6121 (Model 7X3), 6126 (Model 8X3), 6701, 6702, 6704

SUBJECT: Operational Shaft Support (Lost Index Motion)

PURPOSE: To reduce operational shaft flex, and improve reliability of the index mechanism on applications such as continuous multiple copy forms, pin feed, and 45/48 tooth OCR.

SOLUTION: Install the operational shaft support B/M using the following method:

1. Attach the drilling templete (Figure 1A) to the machine frame as shown in Figure 1B. Drill the two holes with a No. 22 drill bit (P/N 450265) and remove template.

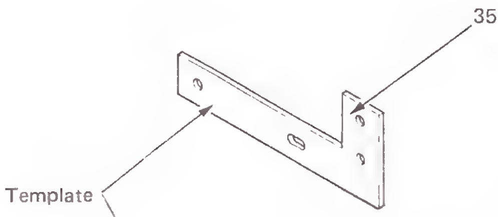
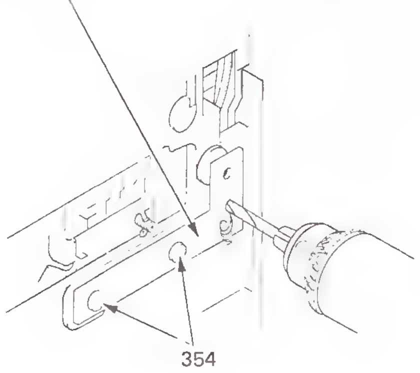


Figure 1A



Bottom View

Figure 1B

Continued

(CEM No. 434 Continued)

2. Assemble and install the operational shaft support bracket asm. as shown below (Figures 2A and B).

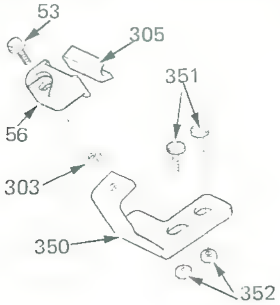


Figure 2A

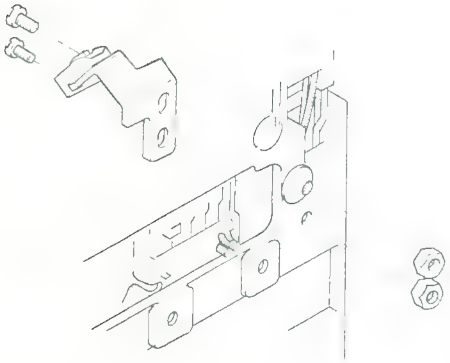


Figure 2B

3. Position the operational support bracket front-to-rear so the front of the bracket evenly contacts the power frame as shown in APM, frame 134.

4. Perform adjustment APM, frame 135.

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
25 355	1279493	Operational Shaft Support B/M (Includes 25-356, 353 and 354)	1	6.75
356	1279494	Operational Shaft Support B/M (Includes 25-53, 56, 303, 305, 350, 351, 352)	1	4.85
53	1128326	Screw — Support Mounting	1	.03
56	1159843	Bearing Support	1	.55
303	56722	Lock Washer — Support Mounting	1	PP08
305	1287910	Operational Shaft Support Bearing	1	.35
350	1279492	Operational Shaft Support Bracket	1	3.70
351	35739	Screw — Support Bracket Mounting	2	.08
352	257187	Nut — Support Bracket Mounting	2	PP13
353	1279491	Drilling Template	1	1.75
354	438566	Screws, Template Mounting	2	PP15

NOTE: Order reference 353 as necessary.

Use Applicable Service Code.

435 RELIABILITY

9-10-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Fabric Ribbon Reverse Failures

PURPOSE: Some replacement ribbon plates may have a bind in the area of the stud and the fork in the plate (Figure 1).

SYMPTOM: Ribbon fails to reverse.

SOLUTION: Check for binds in the area shown in Figure 1. Also check new assemblies before installing. If a bind is found on a new assembly return as a new defective part per General Administrative CEM No. 35.

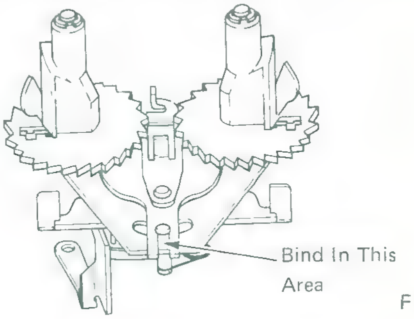


Figure 1

436 RELIABILITY

9-10-80
(Revised) 12-17-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Motor Pawl Assembly – Washer Added

Some machines have nylon washers added to the motor pawl assembly (Figure 1). If experiencing start problems, check for a bind between the washer and the pawls. To eliminate the bind, remove the washers.

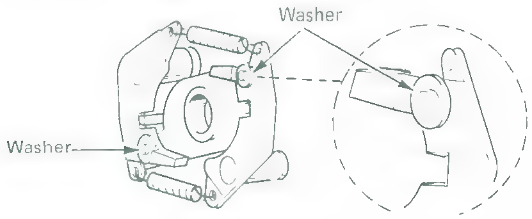


Figure 1

MACHINES AFFECTED: Approx. S/N: Type 6121 (7X1) 0885914 — 0907710; Type 6126 (8X3) 5200758 — 5250192; Type 6126 (8X5) 6603755 — 6730476; Type 6701, 0000001 — 0000095; Type 6702, 1000001 — 1003567; Type 6703, 2000001 — 2004383; Type 6704, 3000001 — 3000761; Type 6705, 4000001 — 4038927.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Service Code 33

437 SERVICE INFORMATION

9-10-80

Type(s): 6701, 6702, 6703, 6704, 6705

(Revised) 3-25-81

SUBJECT: Transformer Replacement – Wire Routing

There is a possibility of interference between the transformer secondary wires and the gear train. To reduce this possibility when replacing the transformer, the secondary wires should be placed on the outside of the Tab/Set Clear link. Figure 1 shows the correct wire path with the machine in the service position. Some early production machines have a metal clamp to secure the wires. Wire ties may be used if necessary.

Continued

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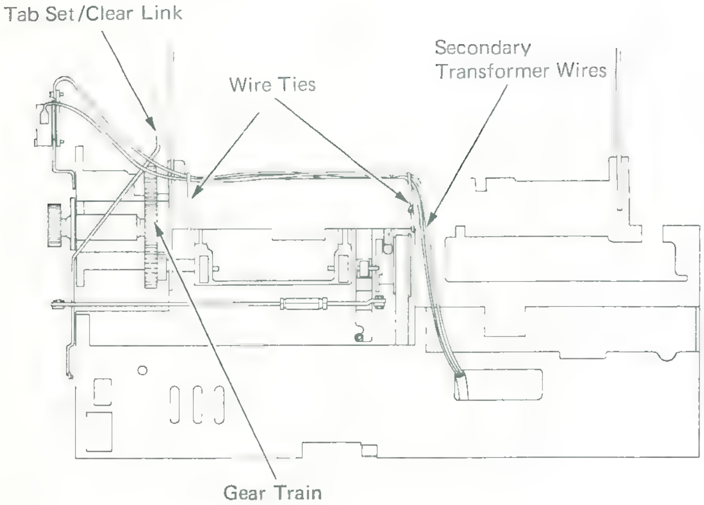
(CEM No. 437 Continued)



438 SERVICE INFORMATION

9-24-80
(Revised) 10-8-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Upper Idler Gear Bushing – Redesigned

OBSOLETE.

439 SERVICE INFORMATION

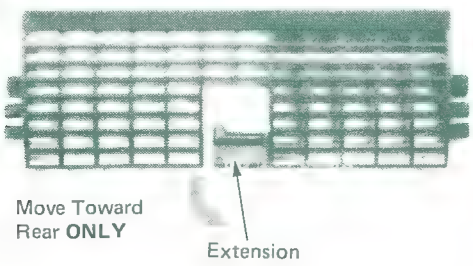
9-24-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Motor Vent Grill Extension – Breakage

Moving the motor vent grill extension too far to the rear or toward the front of the machine may cause it to crack or break. The extension should be moved toward the rear of the machine only far enough to let the linecord in. This extension is required to maintain double insulation.

Note: CSI (F/N 241-5114-2) page 17, item 8, also applies to "Selectric" III typewriters.



440 SERVICE INFORMATION

9-24-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Cable Guide – Redesigned

The velocity cable guide (02-217) located on the left-hand side of the carrier has been redesigned. The guide is now installed by hooking it over the carrier casting instead of it being held in place by the retainer (02-49) (Figure 1).

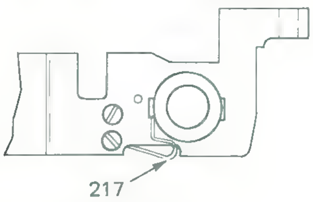


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY	PRICE
02	217	1141637	Cable, Guide	1	.05

441 SERVICE INFORMATION

11-5-80

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Two-Piece Rotate Arm – Redesigned

The two-piece rotate arm has been redesigned to interlock the upper and lower rotate arms together (Figure 1). This will prevent the parts from spreading during a print operation.

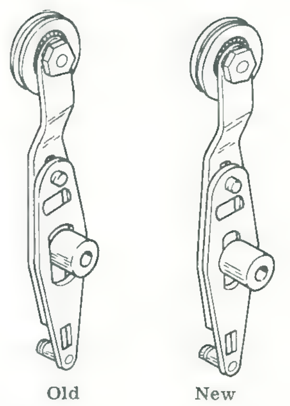


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	514	1147196	Two-Piece Rotate Arm Asm.	1	2.75

Parts Information: The individual parts (upper and lower arm) will no longer be available. The old style two-piece arm will be used until depleted.

442 SERVICE INFORMATION

11-5-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Homing Changes – Rotate Tape Replacement

PURPOSE: Reduce rotate homing adjustment change (drift) after rotate tape replacement.

SYMPTOM: Rotate homing adjustment changes (drifts) within a short time after replacement of a rotate tape. This can occur if the rotate tape is not fully seated, i.e., pulled tight, around the rotate pulley. Normal use causes the tape to seat properly, and the homing adjustment changes. This symptom is sometimes incorrectly referred to as "tape stretch."

SOLUTION: After replacement of the rotate tape and completion of the rotate adjustments, type several lines of repeat underscores. Then check and make the typehead homing adjustment as required.

Note: Machine damage can occur from operating the repeat underscore before making correct rotate adjustments, as well as from operating the print mechanism without the platen and element in place.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

443 SERVICE INFORMATION

11-5-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Tilt Rings – Assembled Incorrectly

There is a possibility of tilt rings (02-333, 335) assembled with incorrect tilt ring bases (02-300). 96 character and 88 character tilt ring bases are not interchangeable. There is a difference in the angle and position of the tilt detent teeth.

If experiencing vertical alignment problems, check the tilt ring base. 96 character tilt ring bases have a small notch to the rear of the zero tilt tooth, (Figure 1). 88 character tilt ring bases have no notch in this location.

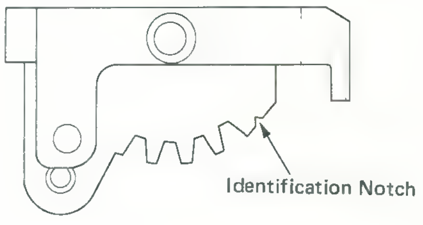


Figure 1

NOTE: Early production 96 character tilt ring bases have a black oxide finish, as do the 88 character bases. Current production 96 character bases are copper colored to aid in identification and elimination of the asm. problem.

Continued

(CEM No. 443 Continued)

If this condition is encountered, replace the tilt ring.

Check field stock of tilt rings, and return any which are incorrectly assembled as NEW DEFECTIVE.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Applicable Service Code

444 SERVICE INFORMATION

11-5-80

(Revised) 8-26-81

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: Custom Keybuttons

The blanket part number for all custom keybuttons (21-31) **except** position D-12 is P/N 1302800. Position D-12 is P/N 1254207. Add this information to your type catalog (S241-5687).

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

445 SERVICE INFORMATION

11-5-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Rotate Bellcrank Stud — Installation

The rotate bellcrank stud (23-483) now press/fits into the power frame. Install the stud through bellcrank (23-220), differential bracket (23-485), spacer (23-487) and power frame. Start nut (23-102) on the stud threads and tighten the nut until the stud bottoms against the power frame.

446 SERVICE INFORMATION

12-17-80

(Revised) 10-7-81

Type(s): 6121, 6122, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Replacing Broken Selector Latch Links

The solenoid selection cables (24-353 Mag Card APM F/N 241-5584) used on the Mag Card can be used to replace broken selector latch links (21-316) on the "Selectric" typewriter without removing the motor:

1. Remove the clevis from the selector latch link.
2. Remove the link by breaking it with duck bill pliers or other suitable tool.
3. Install solenoid selection cable (24-353 Mag Card) through hole in selector latch and attach the nut and clevis.
4. Attach clevis to the selector interposer and adjust the cable.
5. Tighten the nut after adjustment.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
21	305	1091057	Nut, Cable		—
	316	1460846	Cable		1.65
24	353	1460846	Cable (Mag Card)		1.65

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .3 Hr.

Use Applicable Service Code

447 SERVICE INFORMATION

12-17-80

(Revised) 10-7-81

Type(s): 6121, 6126, 670X

SUBJECT: Pinfeed Platen Support B/M (A-Frame Only)

PURPOSE: A pinfeed platen support B/M (49-50) is now available to reduce movement of the pinfeed platen caused by typehead impact. [Max. pin to pin approx. x5, 10" (254.0 mm) — x3, 9 1/2" (241.30 mm) — x1, 6" (152.40 mm)]

SYMPTOM: Smeared characters.

SOLUTION: Install the support B/M (49-50) on the right side of the platen (Figure 1) as described below:

1. Remove platen asm. and deflector.
2. Remove LH platen knob, LH platen bushing, pinwheels and core.
3. Assemble support bracket asm. (49-01, 40, 103, 47, 44, and 43) as shown.
4. Install the support bracket asm. on the platen shaft as shown. Do not tighten screws (49-47 and 01).
5. Install the pinwheels, core, LH platen bushing and LH platen knob; tighten only the platen knob screws.
6. Hold the support bracket asm. up in a vertical position while installing the platen.
7. Position the pinwheels and core as far to the left as possible and tighten the pinwheel setscrews.
8. Remove platen asm. and center cover.
9. Install the base (49-45) and guide spring (49-41) on the front of the A-Frame in the slot as shown. Attach with clamp (49-42) and screw (49-46) as shown. Leave screw (49-46) loose at this time. **Note:** End of guide spring with hole should be between the base and A-Frame.
10. Guide the support bracket (49-43) under the extension of the support base (49-45) while installing the platen asm.
11. Slide support base asm. and support bracket asm. as close to the RH pinwheel asm. as possible.
12. Hold the support base (49-45) down against the paper release rod (22-269). Position the spring (49-41) so the support bracket (49-43) will slide under the extension of the support base (49-45) without bending the spring (49-41). Then tighten the screw (49-46).
13. Hold the support bracket (49-43) so that the extensions touch each side of the support base (49-45) while tightening the bushing screws (49-1).
14. Hold the support bracket (49-43) to the rear (both extensions touching the support base) while tightening the screw (49-47).
15. Remove the platen.
16. Install center cover and deflector.
17. Guide the support bracket (49-43) between the deflector and the center cover while installing the platen.

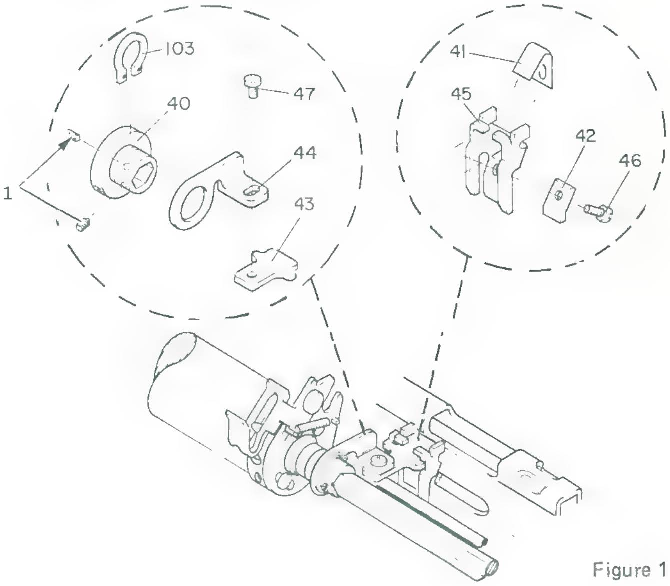


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
49	1	1175101	Screw	2	PP01
	40	1256673	Bushing	1	2.00
	41	1256674	Guide Spring	1	.75
	42	1256675	Clamp	1	.65
	43	1256676	Support Bracket	1	1.10
	44	1256677	Support	1	1.05
	45	1256678	Support Base	1	2.65
	46	0038351	Screw	1	.08
	47	1117759	Screw, Support	1	PP14
	50	1256679	Support B/M	1	—

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: 1 Hr.

Use Applicable Service Code

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448 SERVICE INFORMATION 12-17-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Stop – Selector Cam Lever Mounting Bracket – "A" Frame With Double Index

A positive stop has been released to prevent accidental bending of the selector cam lever mounting bracket (20-327) on machines with the double index mechanism. A bent mounting bracket can result in line space failures. On double index machines, the line space lever is in the center of the cover slot in its extreme rear position. With the stop installed the lever cannot be forced to the rear of the slot. Install the stop as illustrated in Figure 1.

This part is for field use only.
Install as required.

ADJUSTMENTS: Form stop so that it just contacts the index lever in the rear detent position.

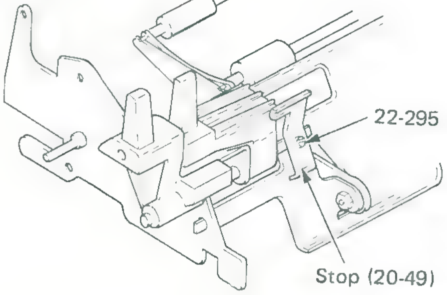

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
20	49	1256686	Stop	1	5.00

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Applicable Service Code

449 SERVICE INFORMATION 1-28-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Bellringer Bellcrank – Redesigned

The bellringer bellcrank (09-106, 10-8) has been redesigned as shown in Figure 1. The paddle portion has been lengthened on both 7XX,' 8XX and 670X parts and an extension added to prevent the bellcrank from slipping over the top of the linelock bail on 8XX and 670X machines (09-80). The tip of the bellcrank has also been modified to eliminate interference with the inhibitor actuation bellcrank (26-126) while typing through the right-hand margin on correcting machines, which can result in unwanted correct tape feed operations.

The redesigned parts are compatible with all levels of machines.

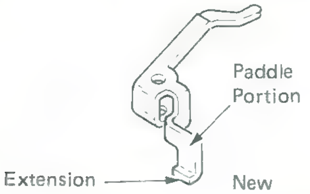

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
09	106	1256666	Bellringer Bellcrank	1	.25
10	8	1256662	Bellringer Bellcrank	1	.35

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Old level parts will no longer be available.

Use Applicable Service Code

450 SERVICE INFORMATION 1-28-81

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: "Selectric" III Sound Reduction – B/M

The six insulation strips on the left and right sides of the bottom cover have been removed. These parts were found to be ineffective in the reduction of sound. The parts were included in early build "Selectric" IIIs, but will not be included in future B/Ms or machines.

NOTE: Until installation instructions are released for the "Selectric" III sound reduction B/M refer to the APM, Mech 30 right frame.

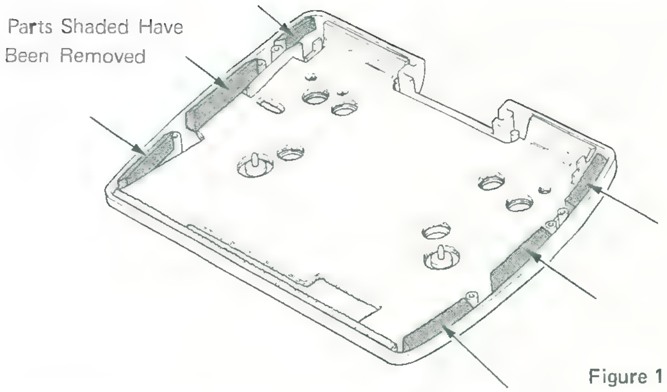

Figure 1

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

451 SERVICE INFORMATION 3-25-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Carrier Return Unlatching Link – Interference

PURPOSE: Inform the field of the possibility of the carrier return unlatching link binding on shift brake (16-208), print shaft mounting bracket screw (02-37), or transport pulley and bracket assembly (18-130).

SYMPTOM: Carrier return fails to latch reliably (partial carrier return).

SOLUTION: Form the unlatching link with duckbill pliers or other suitable tool to remove the interference.

ADJUSTMENTS: Remain the same.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

452 SERVICE INFORMATION 3-25-81

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Dual Impression Cam/Mounting Bracket – Interference

There is a possibility of interference between the DI cam (21-426) and the DI cable mounting bracket (21-425) on some "Selectric" II and III machines. This interference is the result of an accumulation of tolerances in the power frame. A washer (P/N 1175868) (23-476) has been added on an as needed basis to correct the interference problem. If this problem is seen in the field, washer (P/N 1175868) (23-476) can be added as shown in Figure 1.

ADJUSTMENTS: Remain the same.

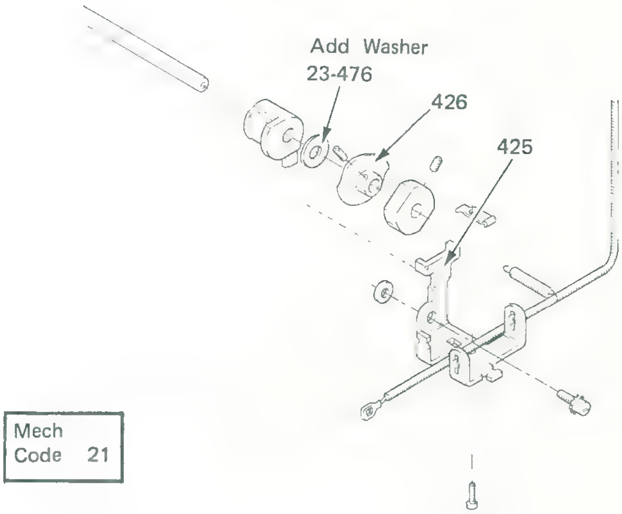

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	476	1175868	Washer	1	.02

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

454 SAFETY 4-8-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Motor And Drive Double Insulation System

PURPOSE: Inform the field of the safety exposure to the Customer Engineer in the Motor And Drive Double Insulation System.

SAFETY INFORMATION: The Double Insulation System is designed to protect the customer from possible electrical shock. This is accomplished by isolating all hazardous voltage by at least two separate and unrelated levels of insulation (Figure 1). The Double Insulation System does not fully protect the Customer Engineer. The possibility of an electrical shock is increased because there is only one level of insulation between the Customer Engineer and the live parts of the motor when the covers are removed and the CE is servicing the machine in this area. The motor shell is not double insulated, but has only basic insulation as indicated in (Figure 1) 1st level of insulation. The second level of insulation consists of the motor mounts (11-22).

CEs must be aware that on 2 wire double insulated machines, an insulation fault in the motor will result in a shock if the motor shell is touched along with a ground source.

SAFETY PRECAUTION: Turn the motor switch off prior to touching the motor shaft or shell. Do not hold motor in your hand to test. (To check for a faulted motor, make a resistance check between the motor shell and the motor leads, using your Volt-Ohm Meter. A reading of infinity indicates good insulation.)

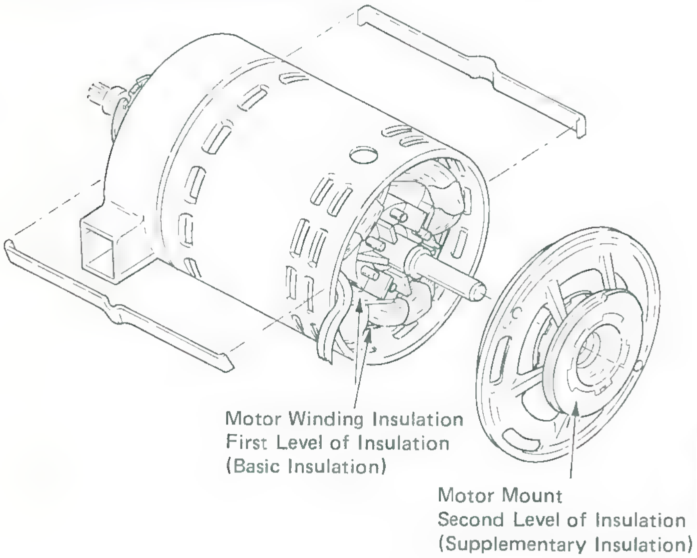
Motor Winding Insulation
First Level of Insulation
(Basic Insulation)
Motor Mount
Second Level of Insulation
(Supplementary Insulation)

Figure 1

NOTE: On 3 wire machines, if the ground strap is not present between the motor and frame (or is not properly installed), the risk of a shock is somewhat higher than with Double Insulated machines because the machine frame is grounded.

Use Service Code 33

This CEM expires 4-8-82

455 SAFETY 5-20-81

Type(s): 6704, 6705 (Revised) 2-10-82

SUBJECT: Possible CE Safety Exposure – Line Cord, Motor Pulley Contact

PURPOSE: **PRECAUTION:** The motor shell could become live (i.e., line voltage present on the motor shell) on dual pitch "Selectric" IIIs manufactured prior to the S/Ns listed below. The length of the line cord from the white strain relief to the transformer may be excessive. The added length can allow the cord to contact the motor pulley/shaft. This may wear the line cord insulation, resulting in the shell becoming live.

NOTE: This condition is an exposure to the CE only, the customer is protected by the second level of insulation (See "Selectric" CEM No. 454).

SAFETY CORRECTIVE ACTION: Check for this condition on the NEXT SERVICE CALL, **BEFORE** performing any other service, as follows:

1. Unplug the line cord and remove the covers.
2. Check for damage to the line cord insulation in the area indicated and replace it if damage is evident.
3. Install wire tie (11-606) as shown in Figure 1.
4. Reapply power and check for proper machine operation.

NOTE: All machines within the specified S/N range must be checked for this condition on the next service call. The wire tie must be installed on **ALL** machines. (The wire tie is plant installed on machines above the S/N listed.)

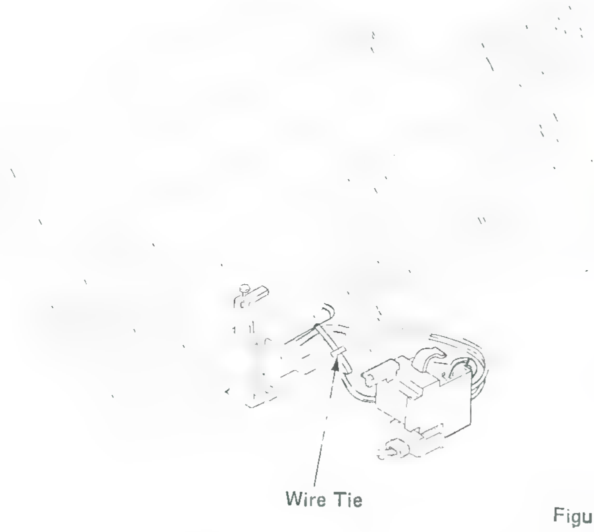

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
11	52	1336439	Line Cord 8 Ft. SE III DP	1	4.55
	52	1336440	Line Cord 13 Ft. SE III DP	1	6.45
	606	1245622	Wire Tie	1	.07

MACHINES AFFECTED: Below approx. S/N: Type 6704 — 3006980, Type 6705 — 4184311, Type 6705 — 5124991.

Use Service Code 33

This CEM Expires 5-20-82

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456 RELIABILITY

8-26-81

Type(s): 6705

(Revised) 1-27-82

SUBJECT: Cover – Defective Paint

PURPOSE: Small amounts of paint may come off with the packing tape when the tape is removed at installation of some "Selectric" IIIs.

SYMPTOM: This condition is most likely to occur on the left side of the machine near the seam between the center and bottom cover. The problem is limited to covers painted in Raven Black, Topaz Bronze and Marlin Blue.

SOLUTION: Use touch up paint (05-500, 501) or replace cover(s) as required.

MACHINES AFFECTED: Between approx. S/N: Type 6705, 5048500-5083310.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 33

This CEM Expires 1-27-83

457 SERVICE INFORMATION

7-15-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Cycle Clutch Spring – Redesigned

The extensions on the cycle clutch spring (23-404) have been changed to make them both the same length. The cycle clutch spring can now be installed with either extension to the left.

Parts Information: Existing field stocks will be used until depleted.

458 SERVICE INFORMATION

7-15-81

Type(s): 6126

SUBJECT: Rotary Backspace Bellcrank Stop – Level 1 Field Fix

The backspace bellcrank downstop (24-116) can be installed on a machine with all steel transport when the bellcrank upstop lug on the Level 1 backplate is weak or broken.

PROCEDURE:

1. Remove two L-1 backplate mounting screws (24-14 and 24-113).
2. Using a No. 22 bit, drill the threads out of the holes in the power frame from which the screws were removed.
3. Install the bellcrank downstop as shown in Figure 1 with two screws (24-114 and 24-117) and one washer (24-119). Use Level 2 adjustments to check backspace motion.

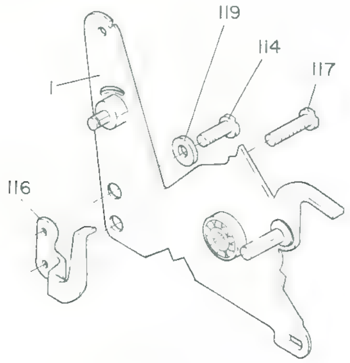


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
24	114	322065	Screw, Downstop	1	—
	116	1205943	Stop, Down	1	—
	117	1164581	Screw	1	—
	119	1090622	Washer	1	—

459 SERVICE INFORMATION

7-15-81

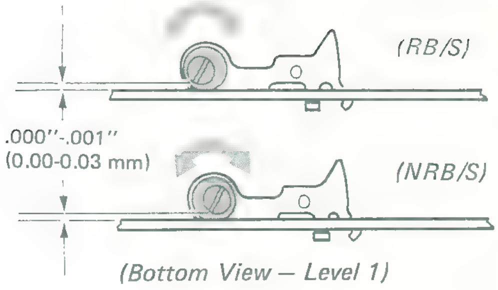
Type(s): 6121, 6126

(Revised) 1-27-82

SUBJECT: Pawl Mounting Stud

Frame 119 of APM 241-5939-3 is incorrect. On NRB/S machines, the eccentric screwhead should be to the left and on RB/S machines, the eccentric screwhead should be to the right. This correction is shown in Figure 1. Mark this change in your APM.

Pawl Mounting Stud (Final)
(06-26)



Use Applicable Service Code.

Figure 1

460 SERVICE INFORMATION

7-15-81

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Escapement Pawl Mounting Stud And Spacer (RB/S) – Redesigned

The Level 2 escapement pawl mounting stud (07-5) and spacer (07-3) have been redesigned to eliminate the need for the former level spacer (P/N 1204370) and shim (P/N 1290994).

When replacement of either the stud or the spacer is required on machine below the specified S/N range(s), replace both parts with the new level parts and discard the shim.

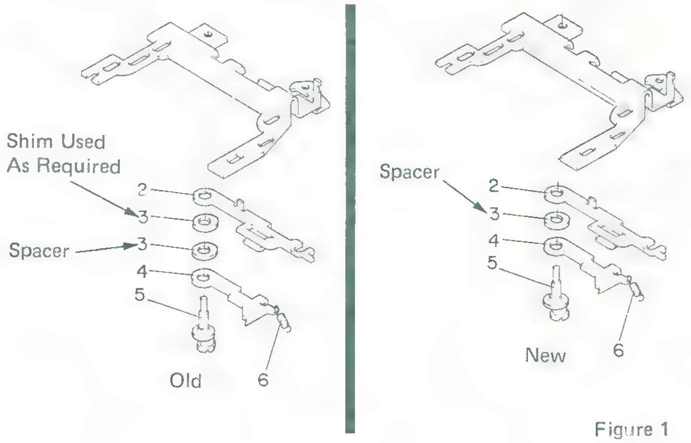


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
07	3	1256873	Spacer	1	—
	5	1256619	Stud, Pawl, L-2	1	—

MACHINES AFFECTED: S/N: (8X3) 5289139, (8X5) — 6868874, 6701 — 0001239, 6702 — 1003697, 6703 — 2005463, 6704 — 3003246, 6705 — 4110573.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

461 RELIABILITY

7-15-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Torque Limiter Hub – Defective

PURPOSE: Some machines were manufactured with an excessive taper on the shoulder portion of the torque limiter hub (25-3) (Figure 1).

SYMPTOM: The taper will result in the torque limiter spring (25-9), torque limiter arbor (25-11), CR spring (25-13) and CR pinion being driven to the right into the "C"-clip during machine operation. A binding condition or premature wear of these parts can occur.

SOLUTION: When experiencing this symptom, replace the torque limiter (25-3). Examine the other affected parts and replace as necessary.

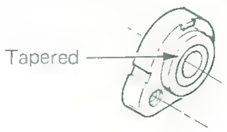


Figure 1

Continued

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(CEM No. 461 Continued)

MACHINES AFFECTED: Approx S/N: Type 6121 (Model 7X1) 0918226-0955085; Type 6126 (Model 8X3) 5261152-5295026; Type 6126 (8X5) 6777398-6882781; Type 6126 (Model 895) 4960127-4993029; Type 6701, 0000159-0004723; Type 6702, 1003579-1004433; Type 6703, 2004488-2007464; Type 6704, 3000999-3005259; Type 6705, 4045275-4158376; Type 6705, 5009200-5066000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Service Code 33

This CEM Expires: 4-1-82

462

SERVICE INFORMATION

7-15-81

Type(s): 6704, 6705

SUBJECT: PN/PL Correction

The margin pointer (10-100) should be P/N 1254997. Mark this change in your PN/PL.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
10	100	1254997	Margin Pointer — Dual Pitch	1	—

463

SERVICE INFORMATION

8-26-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Screws Changed In Cycle Clutch Bracket

CSI INFORMATION: The screws (21-228) that mount the bracket (21-532) that holds the guide assembly (21-530) have been lengthened. This change was made to eliminate the possibility of the screws stripping.

NOTE: On machines that have this change, there may be some interference when using the Hooverometer to make the "power on" adjustments. The red handle brush (P/N 0003701) or any other suitable tool can be used on these machines.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

464

SERVICE INFORMATION

8-26-81

Type(s): 6126, 6703, 6704, 6705

SUBJECT: Correcting Lift and Feed Actuator Stud

SYMPTOM: The correcting lift and feed actuator stud (25-54) may be replaced with P/N 1466537 currently used in Mag Card. This stud has a slotted head for easier installation and removal.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
26	54	1466537	Stud	1	.40

465

SERVICE INFORMATION

8-26-81

Type(s): 6121, 6126

SUBJECT: A-Frame Replacement On Pre-Eccentric Overthrow Stop Machines

The A-frame asm. (22-228) is now available with eccentric index overthrow stop only. When replacing the A-frame asm. on pre-eccentric overthrow stop machines, it may be necessary to remove some material from the power frame with a file or other suitable tool in the area directly below the eccentric overthrow stop. This eliminates interference with proper platen height adjustment on the right side.

CAUTION: Use shop towels or other protection to keep metal filings away from other mechanisms.

466

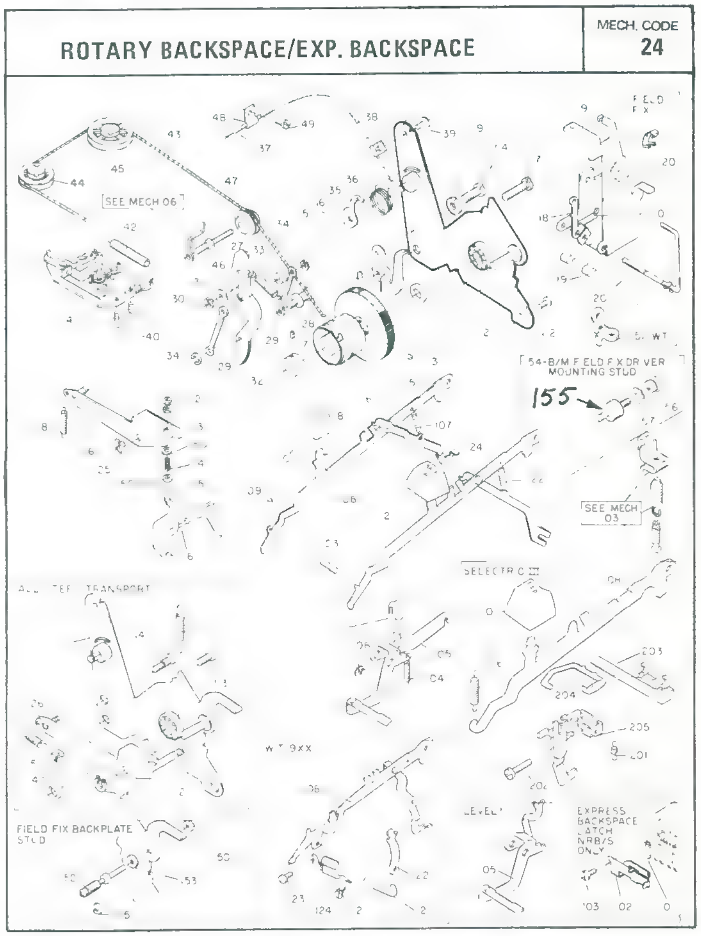
SERVICE INFORMATION

8-26-81

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: APM Correction – Backspace Driver Mounting Stud

PURPOSE: The reference number for the field fix backspace driver mounting stud is incorrect. It should be part reference 24-155. Mark this correction in your APM.



467

SERVICE INFORMATION

10-7-81

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: Court Reporter Element – Underscore

PURPOSE: Some 96 character Courier 10 Court Reporter elements (P/N 1352030) were manufactured with the wrong underscore.

SYMPTOM: When used on 9 pitch machines the underscore will resemble dashes instead of a continuous line. (The element will function normally on 10 pitch machines.)

SOLUTION: Replace the element.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

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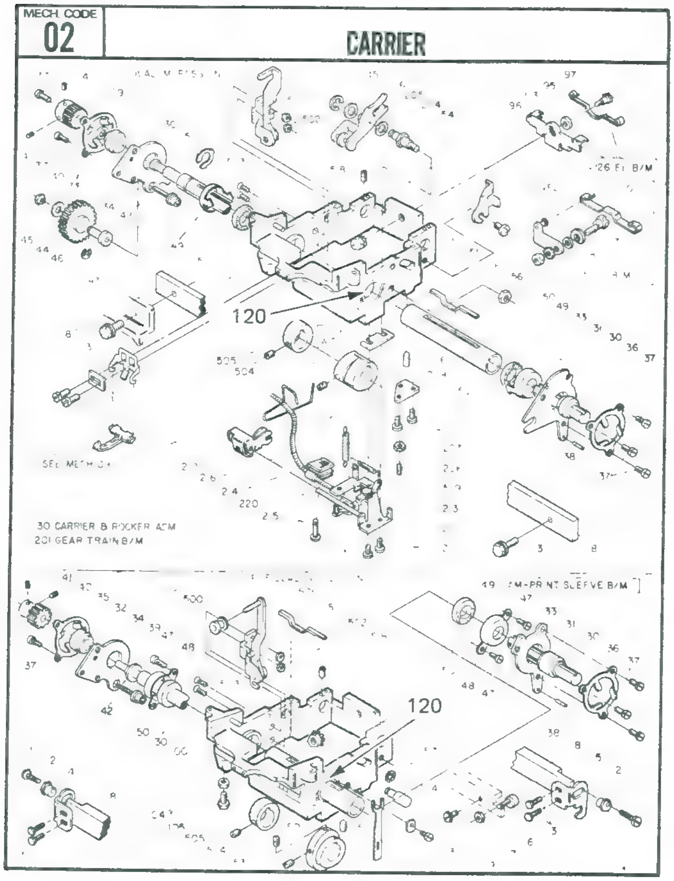
468 SERVICE INFORMATION

10-7-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Carrier Bearing – Reference Number Added To APM

A part reference number (02-120) has been assigned to the carrier bearing for CALL REPORTING PURPOSES ONLY (See Figure 1). Note this change in your APM (241-5939).



469 SERVICE INFORMATION

10-7-81

Type(s): 6121

(Revised) 12-2-81

SUBJECT: Margin Set Levers

PURPOSE: The margin set levers (09-15) and set lever assemblies (09-125) have been changed to metal to reduce breakage. The lever and asm. are compatible with current level margin stops (09-18, 35). Machines without current level stops below 7X1 — 4218186, 7X3 — 4859623, 7X5 — 4510354 must have the margin lever asm. (09-125) replaced.

NOTE: When replacing a plastic set lever or asm. with the metal lever, both levers should be changed to the metal lever.

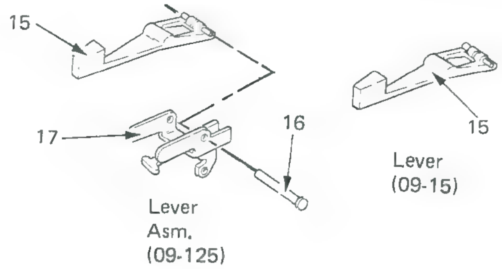


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
09	15	1256665	Margin Lever	1	1.20
	125	1256668	Margin Lever Asm.	1	2.90

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Plastic levers and assemblies will no longer be available. Present stock of the margin rack assemblies (09-150) will contain the plastic set levers until depleted.

Use Applicable Service Code

470 SERVICE INFORMATION

10-7-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Print Quality – Platen Height Adjustment

SYMPTOM: The platen cannot be adjusted low enough to get even top and bottom print. Check the platen height adjustment with the platen gauge. With the gauge installed and the platen adjusted for .030" (0.76 mm) clearance between the top of the platen and platen gauge, the platen should need only slight adjustment to get even top and bottom. If the platen height eccentrics require excessive adjustment downward for even top and bottom print, the yoke (02-520) could be the problem. The tilt detent slot may be off location.

NOTE: Check to be sure that related adjustments such as platen front to rear, platen latches, and carrier shoe are not contributing to the problem.

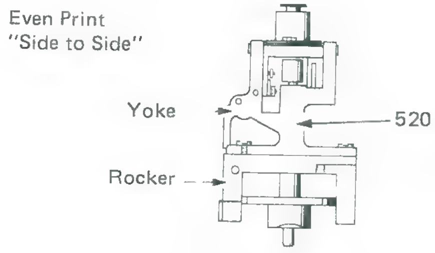
SOLUTION: If the platen height eccentrics do not provide sufficient adjustment range, one of the following corrective actions may be used.

"Selectric" and "Selectric" II prior to eccentric overthrow index pawl stop: **replace the yoke.**

"Selectric" and "Selectric" II with eccentric overthrow: Install B/M 1279505. This B/M includes new LH and RH platen supports (22-280, 291) which have been modified to allow the platen to be adjusted lower. The parts are color coded a gold tone for identification. Individual P/Ns for the LH and RH supports will not be made available. If replacement of the supports does not solve the problem, the yoke must be replaced.

"Selectric" III: **Replace the yoke** (02-520) (platen supports are not available as separate parts on "Selectric" IIIs).

NOTE: If yoke replacement is required, check print adjustments, fine alignment, and character selection adjustments, with emphasis on even side-to-side printing, skirt clearance, and homing. Also make sure that the carrier does not contact the feed rolls during carrier movement.



(Front View)

Figure 1

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

471 SERVICE INFORMATION

10-7-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Tilt Pulley Bushing Breaking

(Revised) 12-2-81

The tilt pulley bushing (23-3) has been redesigned. The length of the bushing was increased to prevent it from breaking when tightening the nut (23-1).

NOTE: A washer (23-17) was installed on machines (as shown in Figure 1) within the specified serial number range as a temporary measure until the redesigned bushing became available. The washer is not required with the redesigned bushing and should be discarded if the new bushing is installed.

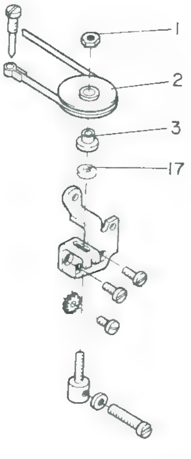


Figure 1

(Continued)

(CEM No. 471 Continued)

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	3	1256038	Bushing	1	.08

MACHINES AFFECTED: Between approx. S/N: Type 6121 (7X1) — 0949339 and 0972293; Type 6126 (8X3) — 5291541 and 5302254; Type 6126 (8X5) — 6874286 and 6904004; Type 6701 — 0003427 and 0006099; Type 6702 — 1003772 and 1008303; Type 6703 — 2005916 and 2015145; Type 6704 — 3003740 and 3009042; Type 6705 — 4136809 and 4235975.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Former level bushings are no longer available.

Use Applicable Service Code

472 SERVICE INFORMATION

10-21-81

Type(s): 6704, 6705

SUBJECT: Transformer Motor

A new motor has been released that includes a **built-in transformer** to provide margin lamp voltage for "Selectric" III 115V — 60Hz dual pitch machines.

The method of connecting the secondary wiring at the margin light switch plate (10-109) has also been changed. Figure 1 shows the old method of connection and Figure 2 shows the new. The switch plate will be redesigned as illustrated in Figure 3. The old plate will be used until stock is depleted but the wires will be connected as illustrated in Figure 2.

If a transformer motor is used as a replacement part, the new method of wiring (Figure 2) must be used. It is not necessary to change the wire connections on machines with the previous transformer (11-603).

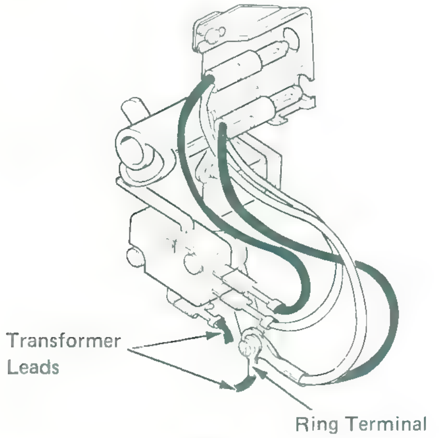


Figure 1

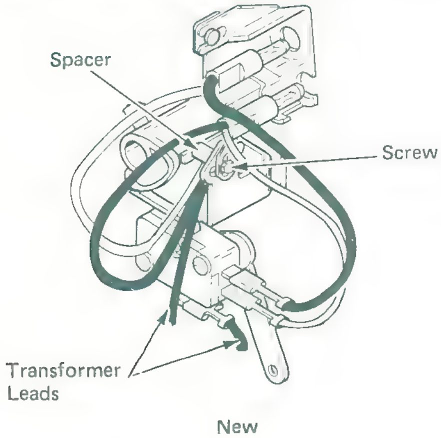


Figure 2

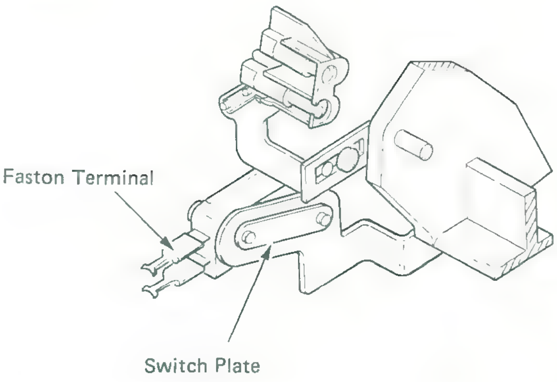


Figure 3

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
10	121	1336413	Screw, Long		.07
	123	1336772	Spacer		—
11	40	1304774	Transformer Motor		—
	83	1304713	Ring Terminal		.25
	88	5412817	Faston Terminal		.30

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

473 SERVICE INFORMATION

12-2-81
(Revised) 2-10-82

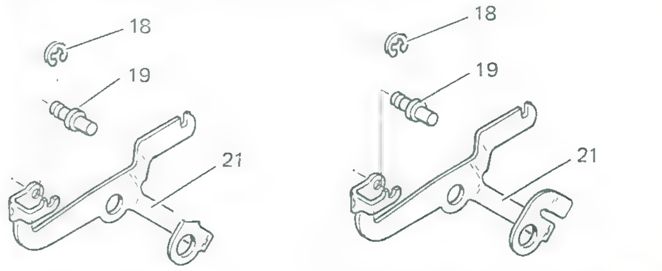
Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: 54T Platen Detent Assembly (A-Frame Only) — Redesigned

PURPOSE: The 54T detent assembly has been redesigned. A solid roller (20-19) now serves to engage the platen ratchet. The diameter of the roller is .010" (0.25 mm) less than that of the previous 2-piece roller/shaft combination, which increases the detenting force on the ratchet. The detent arm (20-21) and clip (20-18) have been changed to accept the new solid roller (Figure 1).

The redesigned detent assemblies are compatible with all "Selectrics" equipped with A-Frame paper feed assemblies.

ADJUSTMENTS: All adjustments remain the same.



"SELECTRIC" A-FRAME

"SELECTRIC" II & III A-FRAME

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
20	18	1336421	"C" Clip	1	.02
	19	1279019	Roller B/M (Includes Roller And Qty 2 PN 1336421)	1	—
	21	1256706	Detent 54T	1	.80
		1256707	Detent Asm. 54T	1	1.30
		1256708	Detent Asm. 54T (7XX)	1	—
		1256709	Detent 54T (7XX)	1	.65

MACHINES AFFECTED: Plant installed above approx. S/N Type 6121 (Model 721) 0995041; Type 6126 (Model 8x3) 5325230; Type 6126 (Model 8x5) 6930100 and 0708850; Type 6701 0010277; Type 6702 1010783; Type 6703 2025804; Type 6704 3014699; Type 6705 4380500 and 5115188.

Continued

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(CEM No. 473 Continued)

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Former level detent arms and assemblies are no longer available. If replacement is required, the new style assembly must be used. Former level detent rollers, shafts, and clips remain available for field replacement.

Use Applicable Service Code

474 SERVICE INFORMATION

12-2-81

Type(s): 6701, 6703, 6704, 6705

SUBJECT: "Selectric" III Incorrect Machine Type Code

Due to a problem with the serializing process in Lexington, the power frames of approximately 4,000 "Selectric" IIIs have been stamped with incorrect machine type codes. All of these machines were stamped with machine type 6702 regardless of actual machine type.

A CEARS reporting error will occur if the incorrect machine type (i.e., 6702) is recorded on a CEARS document.

Lexington manufacturing corrected the majority of these errors prior to shipment by installing a black sticker with correct product, machine type, and plant of manufacture to the left of the machine serial number over the incorrect information.

Offices that received machines that were shipped before corrective action was taken have been notified and provided with stickers. If machines are found that have not been corrected or the original sticker did not adhere, more stickers can be obtained from Lexington Service Planning.

MACHINES AFFECTED: 6701, 0008395—0008611; 6703, 2017481—2018930; 6704, 3011246—3011589; 6705, 4258893—4299931.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

475 SERVICE INFORMATION

12-2-81

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: Top Cover Jammed – Sound Reduction Machines

If experiencing problems in lifting the top cover (30-151) on sound machines, check for excessive side-to-side motion of the hood latch on the RH hood bracket (30-133). The top cover latch (30-136) may have slipped off the RH side of the bracket (30-133) and jammed the cover. Washer (P/N 1091220) has been used in the plant to eliminate the problem and can be used if needed in the field. Install washer as shown in Figure 1.

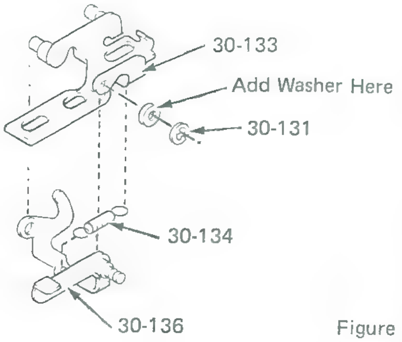

Figure 1

476 SERVICE INFORMATION

1-27-82

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: Page End Indicator – Removal Of Extension

If the customer requests removal of the extension (05-144) on the page end indicator, it can be removed by using a punch and hammer or other suitable tool to release the pin. Do not remove the entire indicator, and leave the metal prongs exposed.

NOTE: Because the page end indicator is a molded plastic part, sharp edges could occur. If the edges are noticeably sharp or rough, remove with file or stone or replace the indicator.

477 SERVICE INFORMATION

2-10-82

Type(s): 6121

SUBJECT: CR Unlatching Link – 7 X 3 and 7 X 5 – PN/PL Correction

The correct part number for the 7 X 3 and 7 X 5 carrier return unlatching link (03-557) is 1164171. The old part number (1164813) is now obsolete. Mark this change in your PN/PL.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
03	555	1164171	Link 7 X 3 and 7 X 5	1	.40

478 RELIABILITY

2-10-82

Type(s): 6126 (Model 8x5), 6705

SUBJECT: Keyboard Touch Problems

PURPOSE: Some 15.5" machines were shipped to the field without any lubrication in the area of the cycle clutch latch and keeper (21-205 & 206).

SYMPTOM: The keyboard is sluggish or heavy to the touch.

SOLUTION: Lubricate with no. 23 grease the latching surface of the keeper (21-205) and the slotted area of the link asm. (21-206).

MACHINES AFFECTED: Type 6126 (model 8x5): 0716365-0717804; Type 6705 5143844-516886.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code 33

This CEM Expires 2-10-83

479 RELIABILITY

2-10-82

Type(s): 6126, 6705

SUBJECT: Escapement Bracket (RB/S) – Defective

PURPOSE: Some machines within the specified S/N range were manufactured with improperly heat treated escapement brackets (07-1).

SYMPTOM: The tab torque bar back up lug on the escapement bracket may break when formed (Figure 1).

SOLUTION: If this condition occurs replace the escapement bracket.

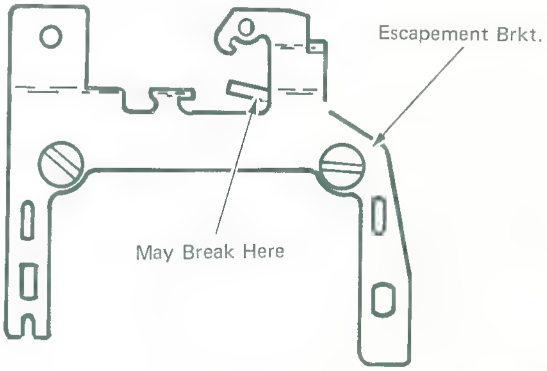

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.
07	1	1204239	Escapement Brkt, Selective Ribbon	1

MACHINES AFFECTED: Between Approx. SN's Type 6126 (Model 8X5), 0716061-0717260; Type 6705, 5147605-5164886.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 33

This CEM Expires 2-10-83

IBM **CEM** Customer Engineers Memorandum
Customer Service Division

Group 259 "Selectric" Typewriter

480 RELIABILITY

2-10-82

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Carrier Return And Express Backspace Shoe Arm – Redesigned

PURPOSE: The thickness of the one piece CR shoe arm (24-105) has been increased by .012 to reduce the flex in the "Selectric" III express backspace mechanism.

SYMPTOM: Difficulty maintaining the required adjustments for proper operation of the express backspace mechanism.

SOLUTION: Install the redesigned express backspace/CR arm (24-105), and shoe (24-111). A grip clip (24-106) is required for mounting the arm on the present installed inventory. (Machines manufactured above the specified S/N range, incorporate a redesigned mounting shaft (25-220) that utilizes the present "C"-clip). When installing the grip clip, maintain minimum side play (no binds) of the arm on the shaft.

ADJUSTMENTS: The following adjustments should be performed in the recommended sequence:

1. Form the express backspace keylever (24-105) so the keybutton assumes the same height as an adjacent character keybutton.
2. Adjust the pawl assembly (24-108) to the left for maximum slot adjustment (APM Frame 204) ("Selectric" III only).
3. Form the CR shoe arm for proper shoe overlap and contact with pinion spring (APM Frame 200).
4. Adjust the CR shoe to pinion clearance for .010"-.020" (3/4 to 1-1/2 turns from shoe engagement) (APM Frame 172).
5. Form the express backspace/CR arm lug to obtan CR shoe engagement with the pinion spring when the TOP of the keylever has traveled .035"-.050" from the TOP of the slot in the front keylever guide comb. Recheck APM Frame 172. (NOTE: This adjustment differs from that in APM Frame 202.)

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
24	105	1336414	Express Backspace/CR Shoe Arm	1	—
	111	1336412	Shoe (Blue)	1	
	106	1115633	Grip Clip	1	
	207	1287500	Express Backspace/ CR Shoe Arm B/M (Includes Qty. 1 Mech. 24, Ref. 105, 106, 111)	1	

MACHINES AFFECTED: Plant installed above approx. S/N Type 6701: 0014988; 6702: 1012839; 6703: 2029941; 6704: 3017964; 6705: 4419911; 6705: 5190268

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: The redesigned arm replaces all previous one-piece CR/exp. B/S shoe arms. The new shoe (blue) must be used on the new arm. The former lever shoe (white) remains available.

Estimated Installation Time: .2 Hr.

Use Service Code 33

This CEM Expires 3-1-83

481 SERVICE INFORMATION

2-17-82

Type(s): 6700, 6701, 6705

SUBJECT: Announcement/Discontinuance – IBM "Selectric" III

Announcement of a new IBM Correcting "Selectric" III model 6700, and standardizing production of the "Selectric" III typewriter.

Discontinuance of the "Selectric" III models 6702, 6703 and 6704.

The "Selectric" III will be manufactured with standard machine features. The "Selectric" III model 6705 is also available with a limited amount of optional features. The model 6701 can be obtained by schools and Government customers only.

"SELECTRIC" III AND CORRECTING "SELECTRIC" III STANDARD TYPEWRITER FEATURES	MODEL 6700	6701	6705
Covers-Topaz Bronze (With Raven Black Bottom Cover)	X	X	X
Acoustical Filter Hood			X
Lighted Margin Scale			X
End of Page Indicator	X	X	X
Repeat Underscore	X	X	X
54 Tooth Indexing	X	X	X
Dual Pitch (Prestige Elite Element Only)			X
Ribbon Cassette	X		X
Fabric Ribbon		X	
Correcting Mechanism	X		X
Half Backspace			X
92 Character Keyboard US Correspondence	X	X	X
10 Pitch (W/Courier Element)		X	
12 Pitch (W/Prestige Elite Element)	X	X	
OPTIONAL FEATURES			
Additional Cover Colors (8) (With Raven Black Bottom Cover)			X
96 Character Keyboard (Choice of 4)			X
92 Character Library Keyboard			X
48 Tooth Indexing			X
Dead Key Disconnect (W/96 Char. Kybd.)			X
Manual Velocity (W/96 Char. Kybd.)			X
Modified Motor (Government Only)			X
Elements (Choice Of Any 2 Current Typestyles)			X

DISCONTINUED FEATURES

* Pin Feed Platen
* Court Reporter Platen
* Card Holding Platen
* OCR Manifold Platen
* Platen Indexing 24, 27, 31, 36 and 45T
* Double Indexing
* Handicapped Attachments
* Stroke Counter
* Ribbon Limiting Device
* Repeat Character (Row B)
* Shift Sensing
* 13 Foot Line Cord
* 3 Wire Line Cord

9 Pitch
External Ribbon Control
All Other Keyboards
(No Field Conversions)
Special Color Covers

* These features can be field installed upon customer request at the current applicable rates.

Continued

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PAINTED COVER PARTS – "SELECTRIC" III

	MODEL	PEBBLE GRAY	TOPAZ BRONZE	LAUREL GREEN	AUTUMN RED	RAVEN BLACK	SABLE BROWN	MARLIN BLUE	COCOA BROWN
TOP COVER ASM.	6700 12P CORR	–	1336021	–	–	–	–	–	–
	6701-6702 10P	1336012	1336013	1336014	1336015	1336016	1336017	1336018	1336019
	6701-6702 12P	1336020	1336021	1336022	1336023	1336024	1336025	1336026	1336027
	6704 DP CORR	1336028	1336029	1336030	1336031	1336032	1336033	1336034	1336035
	6703 10P	1336036	1336037	1336038	1336039	1336040	1336041	1336042	1336043
	6703 12P	1336044	1336045	1336046	1336047	1336048	1336049	1336050	1336051
	6705 DP CORR	1336052	1336053	1336054	1336055	1336056	1336057	1336058	1336059
CENTER COVER ASM.	6700 12P CORR	–	1336925	–	–	–	–	–	–
	6701-6702 SP	1336108	1336109	1336110	1336111	1336112	1336113	1336114	1336115
	6703 SP CORR	1336116	1336117	1336118	1336119	1336120	1336121	1336122	1336123
*	6704 DP CORR	1336124	1336125	1336126	1336127	1336128	1336129	1336130	1336131
	6705 DP CORR	1336132	1336133	1336134	1336135	1336136	1336137	1336138	1336139
BOTTOM COVER ASM.	6700	–	–	–	–	1336192	–	–	–
	6701-02-04	1336188	1336189	1336190	1336191	1336192	1336193	1336194	1336195
	6703-05	1336196	1336197	1336198	1336199	1336200	1336201	1336202	1336203
TOP AND CENTER COVER ASM.	6700 12P CORR	–	1336926	–	–	–	–	–	–
	6701-6702 10P	1336927	1336928	1336929	1336930	1336931	1336932	1336933	1336934
	6701-6702 12P	1336935	1336936	1336937	1336938	1336939	1336940	1336941	1336942
	6703 10P CORR	1336943	1336944	1336945	1336946	1336947	1336948	1336949	1336950
	6703 12P CORR	1336951	1336952	1336953	1336954	1336955	1336956	1336957	1336958
	6704 DP CORR	1336959	1336960	1336961	1336962	1336963	1336964	1336965	1336966
*	6705 DP CORR	1336967	1336968	1336969	1336970	1336971	1336972	1336973	1336974
TOP COVER ASM. SOUND REDUCTION	6701-2 10P	1336060	1336061	1336062	1336063	1336064	1336065	1336066	1336067
	6701-6702 12 P	1336068	1336069	1336070	1336071	1336072	1336073	1336074	1336075
	6704 DP CORR	1336076	1336077	1336078	1336079	1336080	1336081	1336082	1336083
	6703 10P	1336084	1336085	1336086	1336087	1336088	1336089	1336090	1336091
	6703 12P	1336092	1336093	1336094	1336095	1336096	1336097	1336098	1336099
	6705 DP CORR	1336100	1336101	1336102	1336103	1336104	1336105	1336106	1336107
CENTER COVER ASM. SOUND REDUCTION	6701-6702 SP	1336148	1336149	1336150	1336151	1336152	1336153	1336154	1336155
	6703 SP CORR	1336156	1336157	1336158	1336159	1336160	1336161	1336162	1336163
*	6704 DP CORR	1336164	1336165	1336166	1336167	1336168	1336169	1336170	1336171
	6705 DP CORR	1336172	1336173	1336174	1336175	1336176	1336177	1336178	1336179
BOTTOM COVER ASM. SOUND REDUCTION	6701-02-04	1336204	1336205	1336206	1336207	1336208	1336209	1336210	1336211
	6703-05	1336212	1336213	1336214	1336215	1336216	1336217	1336218	1336219
TOP AND CENTER COVER ASM. SOUND REDUCTION	6701-6702 10P	1336840	1336841	1336842	1336843	1336844	1336845	1336846	1336847
	6701 6702 10P	1336848	1336849	1336850	1336851	1336852	1336853	1336854	1336855
	6703 10P CORR	1336856	1336857	1336858	1336859	1336860	1336861	1336862	1336863
	6703 12P CORR	1336864	1336865	1336866	1336867	1336868	1336869	1336870	1336871
*	6704 DP CORR	1336872	1336873	1336874	1336875	1336876	1336877	1336878	1336879
	6705 DP CORR	1336880	1336881	1336882	1336883	1336884	1336885	1336886	1336887

*Center section shipped with double insulated logo. Order 3 wire logo as required.

Parts Information: The "Selectric" III complete cover assemblies will no longer be available. When a complete cover asm. is required, order a top and center cover asm. and the appropriate bottom cover. (Figure 1)

NOTE: Until stock is depleted, orders for the top and center cover asm. will be filled with the complete cover asm.

Use Applicable Service Code

482 SERVICE INFORMATION

2-17-82

Type(s): 6700, 6705

SUBJECT: Announcement – IBM 210 Correctable Ribbon Cassette – IBM 800 T-III Ribbon Cassette

The "Selectric" III ribbon cartridge and ribbon mechanism have been redesigned to increase ribbon yield while offering the operator simplified ribbon loading. The following is a list of the design modifications and features of the new "Selectric" III Ribbon Cassette.

1. Four fewer ribbon mechanism adjustments.
2. Ribbon lift guide and shock wire are on the ribbon cassette.
3. Ribbon cassette replacement is simplified.
4. 38.6% higher character yield per correctable ribbon cassette.
5. 37.9% higher character yield per T-III cassette.
6. Thinner film ribbon and new ink formulation.

THEORY OF OPERATION

The method of operation of the lift and feed mechanisms are very similar to the selective ribbon with the exception of the redesigned lift guides and the T-III ribbon feed.

The lift guides are now part of the cassette. A return spring on the cassette keeps the guides spring loaded against the lift arms. The rest position of the lift arms is determined by forming an extension to the escapement bracket. The lift motion is provided in the same way as the earlier mechanism through the ribbon lift cam and ribbon lift follower. However, the ribbon lift cam and spread adjusting plate have been redesigned and are not compatible with the earlier mechanism.

The feed mechanism for the T-III ribbon has been altered by changing the ratio between the intermediate gear and the upper gear, giving approximately 38% higher character yield per T-III ribbon. The increased yield of the correctable film ribbon is due to the use of a thinner material which allows more ribbon to be wound on the spool.

The design and operation of the correcting mechanism remains unchanged, with the exception of a tape deflector which has been added to the tilt ring.

Field Upgrade

Customers requesting the ribbon cassette to be installed on their existing "Selectric" III should be referred to Marketing for price and availability. Orders will be handled on an MES basis only.

Parts

All ribbon cassette parts will be listed under new mechanism code 27. This CEM is to be used to reference parts, pending update of the APM.

Adjustments

The following adjustments are not required for the ribbon cassette mechanism:

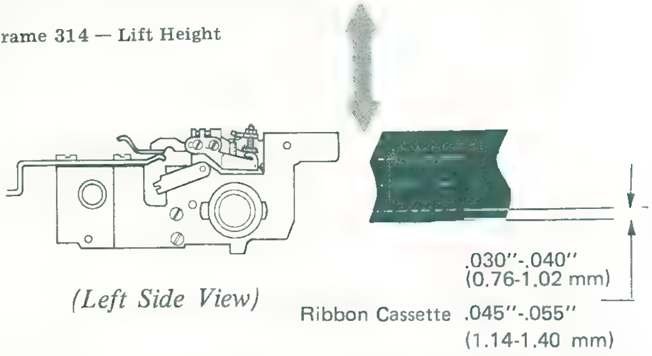
Frame 316 — Shock Wire
Frame 319 — Shock Wire Disengage Lever
Frame 320 — Shock Wire Disengage Lever
Frame 324 — Load Lever
Frame 339 — L/H Ribbon Lift Guide

Continued

(CEM No. 482 Continued)

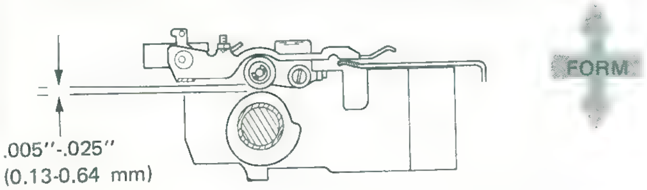
The following adjustments are changed:

Frame 314 — Lift Height



(Left Side View)

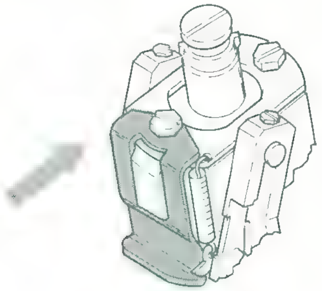
Frame 315 — Lift Arm Stop (Ribbon Cassette)
"For RC Only — Form Stop On Escapement Bracket"

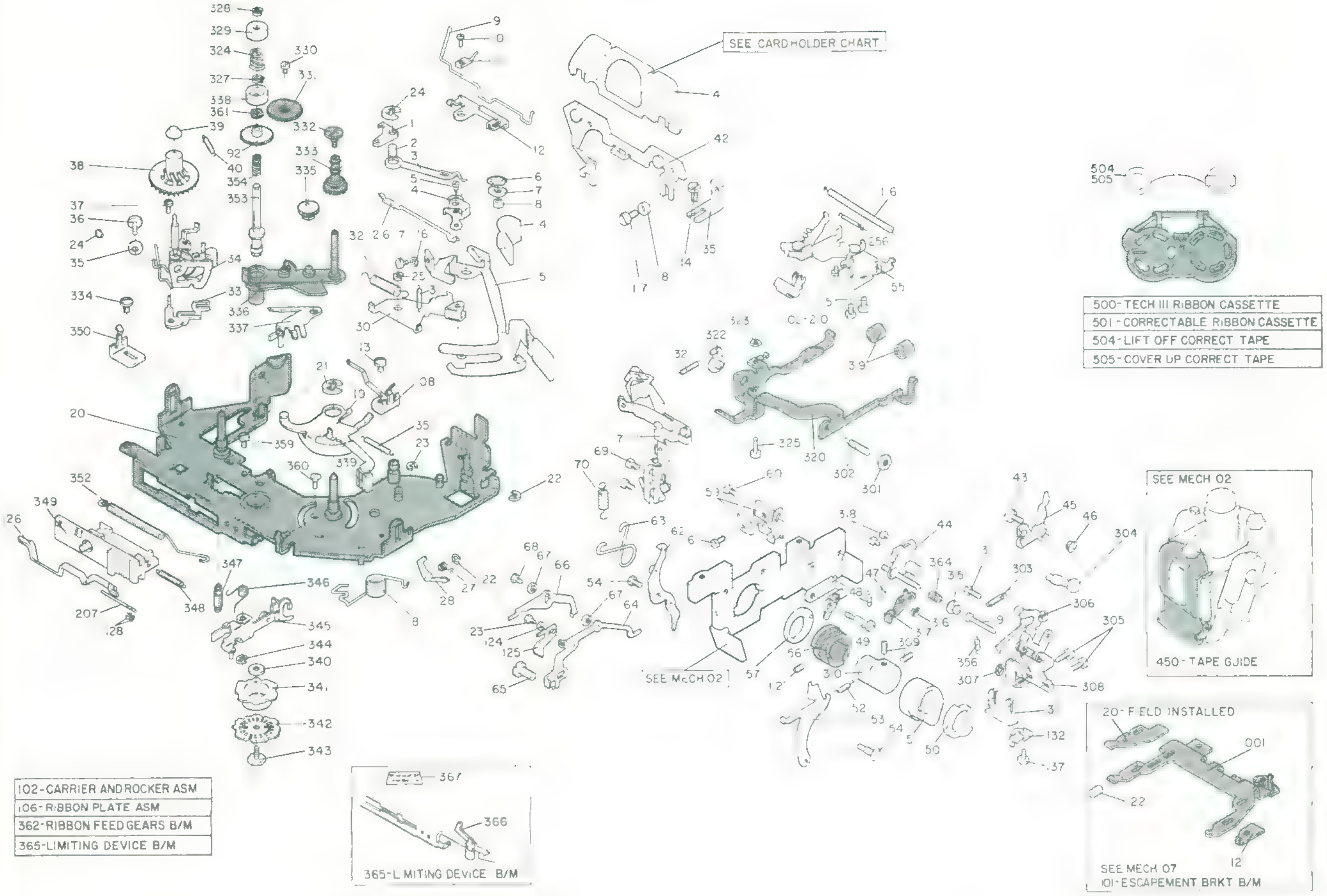


(Right Side View)

The following adjustment is added:

Tape Deflector — Adjust the deflector against the tilt ring.





1. Shaded parts are unique to Ribbon Cassette mechanism.

Continued

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(CEM No. 482 Continued)

MECH/REF.		PART NO.	DESCRIPTION	QTY.	PRICE
27	1	1206022	Bellcrank		
	2	1206020	Spring Fd. Blk.		
	3	1206037	Detent		
	4	1290655	Pawl		
	5	1290653	Screw		
	6	1206012	Wheel, Spiked		
	7	1206033	Washer		
	8	1206014	Spacer		
	9	1206016	Wire, Separator		
	10	48594	Screw		
	11	1206372	Spring		
	12	1206017	Support		
	13	1279490	Pawl — Feed B/M (Inc. Ref. 4, 5, & 216)		
	14	1206882	Guide, Corr. Tape		
	15	1206009	Lever Tape		
	16	1135663	Washer		
	17	1206145	Screw		
	18	1206018	Spring		
	19	1206007	Lever Ribbon Load		
	20	1359633*	Plate, Ribbon		
	21	257982	Retainer		
	22	1103695	Retainer		
	23	219633	Retainer		
	24	1073418	Retainer		
	25	1092125	Retainer		
	27	1206853	Spring		
	28	1359632*	Load Lever Latch		
	30	1206021	Arm, Swing		
	31	1164938	Spring		
	32	1206004	Spring, Sw. Arm		
	33	1206092	Fork Cradle		
	34	1287340	Cradle Asm.		
	35	1072477	Washer		
	36	1206166	Stud		
	37	38261	Screw		
	38	1256182	Ratchet, Supply		
	39	1206083	Cap. Ratchet		
	40	1116729	Spring, Low Bias		
	41	1206424	Cardholder		
		1206368	Cardholder, Pin Feed		
	42	1206219	Bkt. L/H Mounting		
	43	1090007	Stud		
	44	1206040	Follower, Ribbon		
	45	1290568	Follower, Feed		
	46	1206065	Hub, Follower		
	47	1206319	Spring		
	48	1171923	Spring		
	49	1206047	Stud		
	50	1464823	Cam, Tape Feed		
	51	1206046	Cam, Print/Corr.		
	52	1071687	Spring, Inhibit.		
	53	1290579	Inhibitor, Tape Feed		
	54	1206163	Stud		
	55	1290577	Vel. Bkt. Dual Transport		
		1141624	Vel. Bkt. All Nylon Transp.		
	56	1359730*	Cam Ribbon Lift		
	57	1206045	Cam, Tape Lift		
	58	1206044	Follower, Lift		
	59	1206188	Bkt. Cable Guide With Tubing		
	60	1206186	Screw		
	61	1206422	Screw		
	62	1290574	Arm, Actuating		
	63	1206146	Spring		
	64	1290580	Arm, Lift		
	65	1206165	Stud, Lift Arm		
	66	1290595	Arm		
	67	1132211	Washer		
	68	1206809	Screw Lift Asm.		
	69	1206204	Screw		
	70	1206054	Spring		
	71	1206048	Lift Guide		
	102	1359643*	Carrier and Rocker Asm.		
	106	1359640*	Ribbon Plate Asm.		
	108	1206034	Retainer, R.H.		
	112	1164096	Screw, Lift Cam		
	113	1164291	Screw, Cart. Ret.		
	114	1164027	Screw, Sel. Ribbon		
	115	1164580	Screw, Bkt. Mtg.		
	116	1204553	Shock Spring		
	117	1172397	Screw, Sel. Ribbon		
	118	1138796	Washer		
	122	1073418	Clip		
	123	1172397	Screw, Lift Arm Stop		
	124	1290605	Washer, Lift Arm Stop		
	125	1290599	Stop, Lift Arm		
	126	1290578	Bellcrank, Inhib.		
	128	251989	Retainer		
	132	1290601	Guide, Torque Bar		
	135	1206642	Bkt., Sel. Ribbon		
	137	1147429	Screw, T/B Guide		
	207	1290600	Pin, Inhib. Act. Bellcrank		
	216	1290654	Link		
	256	1123827	Spring		
	301	6503	Nut, Lock		
	302	1206556	Screw, Lift Piv.		
	303	1206510	Spring, Fd. Pawl		
	304	1206623	Follower, Feed		
	305	1164939	Screw, Fol. Bkt.		
	306	1290572	Asm, Fd. Cam Fol.		
	307	219633	Clip, Pin Ret.		
	308	1290581	Bkt, Rib. Feed		
	309	1164096	Screw, Fd. Cam		
	310	1164095	Cam. Rib. Fd.		
	311	1164435	Pad, Carr. Support		
	314	1290582	Pin 7/8", Shouldered		
	315	1206517	Roller, Cam Fol.		
	316	219633	Clip, Roll Ret.		
	317	1359729*	Plate Adj.		
	318	1206703	Screw, Plt. Mtg.		
	319	1359714*	Tube		
	320	1359715*	Arm Lift — Sound Reduct.		
		1359563*	Arm, Lift		
	321	1206617	Spring, Wobbler		
	322	1206585	Eccentric, Wob.		
	323	2114985	Nut, Lf. Cr. Loc.		
	324	1206513	Spring Mode		
	325	1206619	Screw, Lift Adj.		
	326	1206605	Screw, Fd. Foll.		
	327	1118361	Retainer, Mode		
	328	219633	Clip, Mode		
	329	1206515	Button, Mode		
	330	1206549	Screw, Int. Gear		
	331	1359638*	Gear, Int.		
	332	1359787*	Screw, Spiked Driver		
	333	1359677*	Spiked Driver		
	334	1164291	Screw, Carr. Ret.		
	335	1206596	Gear, Int.		
	336	1359679*	Swing, Arm		
	337	1206618	Bellcrank, Wobb.		
	338	1206515	Button, Mode		
	339	1206649	Handle Load		
	340	1206692	Washer, Wob. Cam		
	341	1206613	Cam, Wobbler		
	342	1206205	Wheel, Fd. And Lift		
	343	1206537	Screw, Fd.		
	344	264641	Clip, Lift Con.		
	345	1206583	Lever		
	346	1206702	Spring Lift Lev.		
	347	1206560	Spring, Lift Arm		
	348	1091670	Spring, Stencil		
	349	1206598	Lever, Stencil		
	350	1206512	Spring, Ret L.H.		
	351	1206650	Spring Load Lever		
	352	1206562	Spring, Swg. Arm		
	353	1206551	Post, Rib. Fd.		
	354	1206518	Spring, Fd. Gear		
	355	1206697	Gear, Lower		
	356	1164938	Spring		
	359	1164580	Screw, Plate L.H.		
	360	1175097	Screw, Plate R.H.		
	361	1359637*	Gear, Upper		
	362	1359694*	Fd. Grs. B/M		
	364	1359782*	Spring, Lift Follower		
	365	1359722*	B/M, Film Ribbon Lockout		
	366	1206488	Load Latch (Lockout)		
	367	1206491	Label (Lockout)		
02	450	1440012*	Tape Guide RC		
	130	1359643*	Carrier And Rocker RC		
07	001	1359681*	Bkt. Escapement RC *1*		
	101	1359686*	Bkt. Asm. Escapement RC *1*		
	120	1359558*	L.H. Ribbon Stop Bkt. (FI Only)		
	121	1359559*	Corr. Feed Restoring Spring Bkt. (FI Only)		
	122	1359712*	Tube, Downstop		

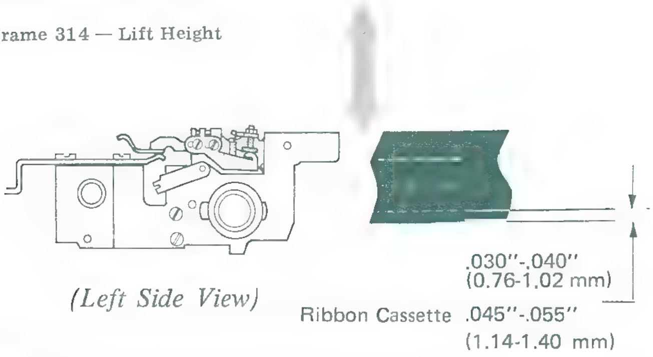
*Unique To Ribbon Cassette Mechanism.

1 If the L.H. Lift Arm Stop breaks, replace with field fix part ref. 120.

(CEM No. 482 Continued)

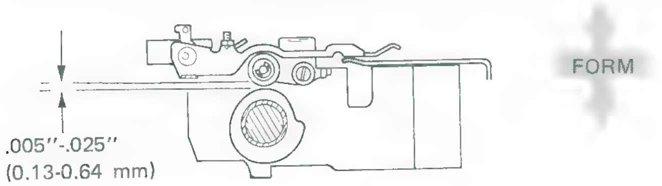
The following adjustments are changed:

Frame 314 — Lift Height



(Left Side View)

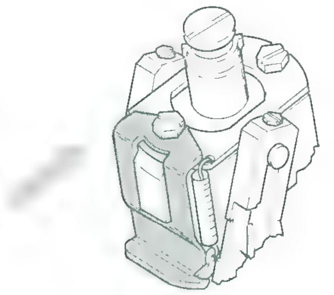
Frame 315 — Lift Arm Stop (Ribbon Cassette)
"For RC Only — Form Stop On Escapement Bracket"

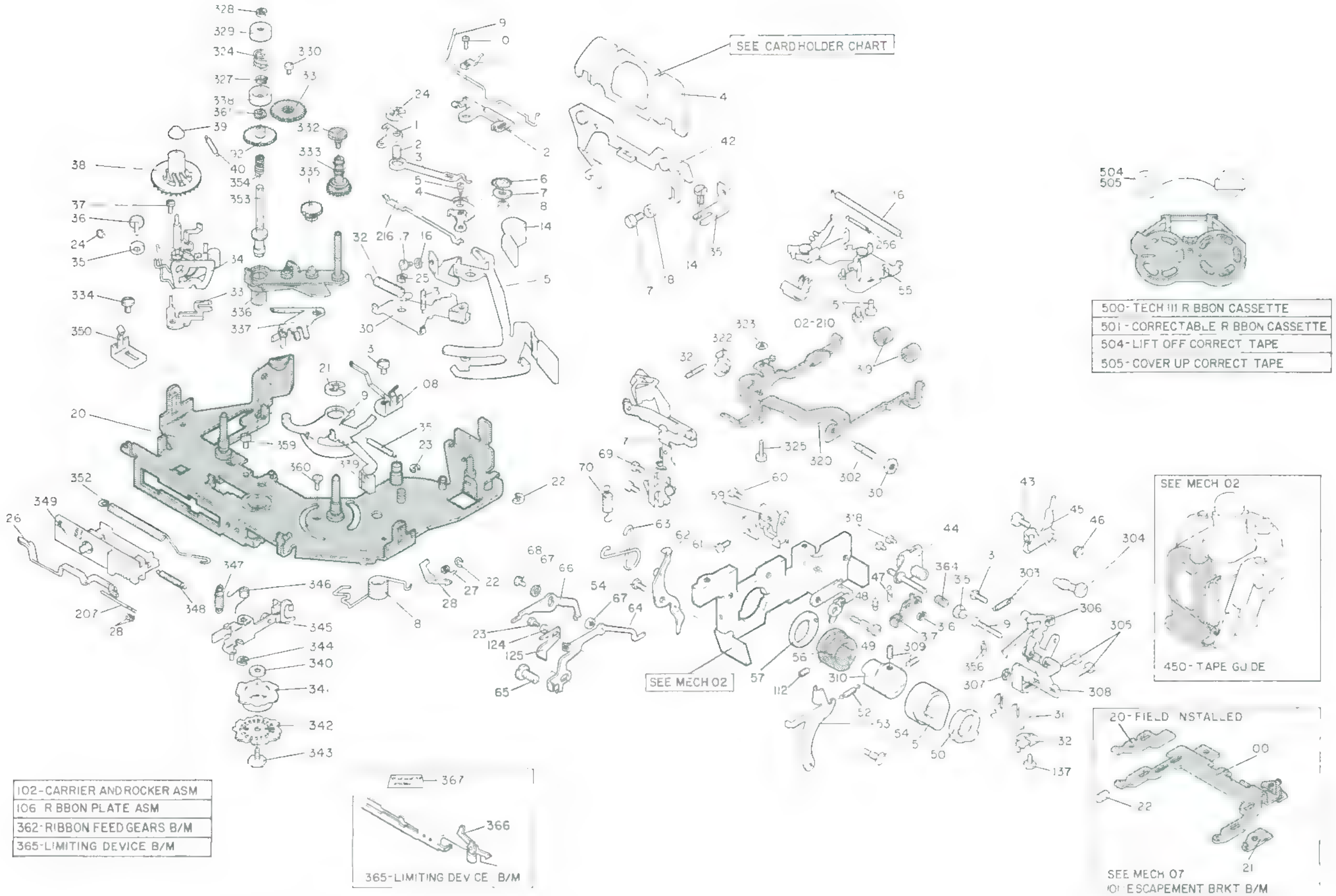


(Right Side View)

The following adjustment is added:

Tape Deflector — Adjust the deflector against the tilt ring.





1. Shaded parts are unique to Ribbon Cassette mechanism.

Continued

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(CEM No. 482 Continued)

MECH/REF.		PART NO.	DESCRIPTION	QTY.	PRICE
27	1	1206022	Bellcrank		
	2	1206020	Spring Fd. Blk.		
	3	1206037	Detent		
	4	1290655	Pawl		
	5	1290653	Screw		
	6	1206012	Wheel, Spiked		
	7	1206033	Washer		
	8	1206014	Spacer		
	9	1206016	Wire, Separator		
	10	48594	Screw		
	11	1206372	Spring		
	12	1206017	Support		
	13	1279490	Pawl — Feed B/M (Inc. Ref. 4, 5, & 216)		
	14	1206882	Guide, Corr. Tape		
	15	1206009	Lever Tape		
	16	1135663	Washer		
	17	1206145	Screw		
	18	1206018	Spring		
	19	1206007	Lever Ribbon Load		
	20	1359633*	Plate, Ribbon		
	21	257982	Retainer		
	22	1103695	Retainer		
	23	219633	Retainer		
	24	1073418	Retainer		
	25	1092125	Retainer		
	27	1206853	Spring		
	28	1359632*	Load Lever Latch		
	30	1206021	Arm, Swing		
	31	1164938	Spring		
	32	1206004	Spring, Sw. Arm		
	33	1206092	Fork Cradle		
	34	1287340	Cradle Asm.		
	35	1072477	Washer		
	36	1206166	Stud		
	37	38261	Screw		
	38	1256182	Ratchet, Supply		
	39	1206083	Cap. Ratchet		
	40	1116729	Spring, Low Bias		
	41	1206424	Cardholder		
		1206368	Cardholder, Pin Feed		
	42	1206219	Bkt. L/H Mounting		
	43	1090007	Stud		
	44	1206040	Follower, Ribbon		
	45	1290568	Follower, Feed		
	46	1206065	Hub, Follower		
	47	1206319	Spring		
	48	1171923	Spring		
	49	1206047	Stud		
	50	1464823	Cam, Tape Feed		
	51	1206046	Cam, Print/Corr.		
	52	1071687	Spring, Inhibit.		
	53	1290579	Inhibitor, Tape Feed		
	54	1206163	Stud		
	55	1290577	Vel. Bkt. Dual Transport		
		1141624	Vel. Bkt. All Nylon Transp.		
	56	1359730*	Cam Ribbon Lift		
	57	1206045	Cam, Tape Lift		
	58	1206044	Follower, Lift		
	59	1206188	Bkt. Cable Guide With Tubing		
	60	1206186	Screw		
	61	1206422	Screw		
	62	1290574	Arm, Actuating		
	63	1206146	Spring		
	64	1290580	Arm, Lift		
	65	1206165	Stud, Lift Arm		
	66	1290595	Arm		
	67	1132211	Washer		
	68	1206809	Screw Lift Asm.		
	69	1206204	Screw		
	70	1206054	Spring		
	71	1206048	Lift Guide		
	102	1359643*	Carrier and Rocker Asm.		
	106	1359640*	Ribbon Plate Asm.		
	108	1206034	Retainer, R.H.		
	112	1164096	Screw, Lift Cam		
	113	1164291	Screw, Cart. Ret.		
	114	1164027	Screw, Sel. Ribbon		
	115	1164580	Screw, Bkt. Mtg.		
	116	1204553	Shock Spring		
	117	1172397	Screw, Sel. Ribbon		
	118	1138796	Washer		
	122	1073418	Clip		
	123	1172397	Screw, Lift Arm Stop		
	124	1290605	Washer, Lift Arm Stop		
	125	1290599	Stop, Lift Arm		
	126	1290578	Bellcrank, Inhib.		
	128	251989	Retainer		
	132	1290601	Guide, Torque Bar		
	135	1206642	Bkt., Sel. Ribbon		
	137	1147429	Screw, T/B Guide		
	207	1290600	Pin, Inhib. Act. Bellcrank		
	216	1290654	Link		
	256	1123827	Spring		
	301	6503	Nut, Lock		
	302	1206556	Screw, Lift Piv.		
	303	1206510	Spring, Fd. Pawl		
	304	1206623	Follower, Feed		
	305	1164939	Screw, Fol. Bkt.		
	306	1290572	Asm, Fd. Cam Fol.		
	307	219633	Clip, Pin Ret.		
	308	1290581	Bkt, Rib. Feed		
	309	1164096	Screw, Fd. Cam		
	310	1164095	Cam. Rib. Fd.		
	311	1164435	Pad, Carr. Support		
	314	1290582	Pin 7/8", Shouldered		
	315	1206517	Roller, Cam Fol.		
	316	219633	Clip, Roll Ret.		
	317	1359729*	Plate Adj.		
	318	1206703	Screw, Plt. Mtg.		
	319	1359714*	Tube		
	320	1359715*	Arm Lift — Sound Reduct.		
		1359563*	Arm, Lift		
	321	1206617	Spring, Wobbler		
	322	1206585	Eccentric, Wob.		
	323	2114985	Nut, Lf. Cr. Loc.		
	324	1206513	Spring Mode		
	325	1206619	Screw, Lift Adj.		
	326	1206605	Screw, Fd. Foll.		
	327	1118361	Retainer, Mode		
	328	219633	Clip, Mode		
	329	1206515	Button, Mode		
	330	1206549	Screw, Int. Gear		
	331	1359638*	Gear, Int.		
	332	1359787*	Screw, Spiked Driver		
	333	1359677*	Spiked Driver		
	334	1164291	Screw, Carr. Ret.		
	335	1206596	Gear, Int.		
	336	1359679*	Swing, Arm		
	337	1206618	Bellcrank, Wobb.		
	338	1206515	Button, Mode		
	339	1206649	Handle Load		
	340	1206692	Washer, Wob. Cam		
	341	1206613	Cam, Wobbler		
	342	1206205	Wheel, Fd. And Lift		
	343	1206537	Screw, Fd.		
	344	264641	Clip, Lift Con.		
	345	1206583	Lever		
	346	1206702	Spring Lift Lev.		
	347	1206560	Spring, Lift Arm		
	348	1091670	Spring, Stencil		
	349	1206598	Lever, Stencil		
	350	1206512	Spring, Ret L.H.		
	351	1206650	Spring Load Lever		
	352	1206562	Spring, Swg. Arm		
	353	1206551	Post, Rib. Fd.		
	354	1206518	Spring, Fd. Gear		
	355	1206697	Gear, Lower		
	356	1164938	Spring		
	359	1164580	Screw, Plate L.H.		
	360	1175097	Screw, Plate R.H.		
	361	1359637*	Gear, Upper		
	362	1359694*	Fd. Grs. B/M		
	364	1359782*	Spring, Lift Follower		
	365	1359722*	B/M, Film Ribbon Lockout		
	366	1206488	Load Latch (Lockout)		
	367	1206491	Label (Lockout)		
02	450	1440012*	Tape Guide RC		
	130	1359643*	Carrier And Rocker RC		
07	001	1359681*	Bkt. Escapement RC *1*		
	101	1359686*	Bkt. Asm. Escapement RC *1*		
	120	1359558*	L.H. Ribbon Stop Bkt. (FI Only)		
	121	1359559*	Corr. Feed Restoring Spring Bkt. (FI Only)		
	122	1359712*	Tube, Downstop		

*Unique To Ribbon Cassette Mechanism.

1 If the L.H. Lift Arm Stop breaks, replace with field fix part ref. 120.

483

SERVICE INFORMATION

2-24-82

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Ribbon Feed Cam Follower Asm.

PURPOSE: Selective ribbon machines are now manufactured with the same ribbon feed cam follower, FTB (15-010) as is used in Electronic Typewriter. A new pin (15-019) is required to mount the follower. (Figure 1 illustrates the old and new pin).

The former level follower is no longer available. If replacement is required, order both the new follower and pin. Old level pins remain available.

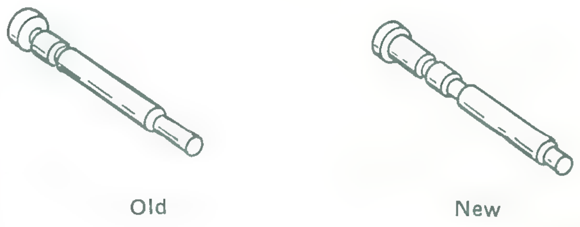

Figure 1

Continued

(CEM No. 483 Continued)

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
15	10	1358301	Follower Asm., Ribbon Feed FTB	—	—
	19	1256684	Stud		

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

484 SERVICE INFORMATION

2-24-82

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: Keyboard Damper Spring – Changed

PURPOSE: The cycle clutch bail leaf spring (21-240) has been replaced with coil springs on both sides of the key board. This change was made in order to maintain a more reliable adjustment of the cycle clutch latch pawl to keeper on the assembly lines. It will also allow the touch to be distributed more evenly across the keyboard.

The LH spring (21-210) is connected to an interposer (21-113) that has been added to the LH side of the keyboard (Figure 1). The right and left damper springs can be installed in keyboards in the field by ordering the interposer, screw, and springs. On the RH side replace the center screw in the plate with the longer screw that was ordered and attach the spring. The center leaf spring will remain available.

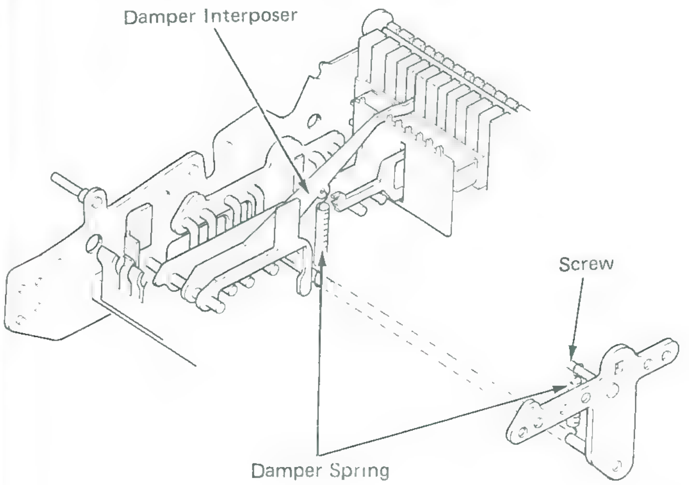

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
21	113	1336452	Interposer - Damper	1	—
	210	1147354	Spring	2	
	301	1128113	Screw	1	

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

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480 RELIABILITY

2-10-82
(Revised) 5-19-82

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Carrier Return And Express Backspace Shoe Arm – Redesigned

PURPOSE: The thickness of the one piece CR shoe arm (24-105) has been increased by .012 to reduce the flex in the "Selectric" III express backspace mechanism.

SYMPTOM: Difficulty maintaining the required adjustments for proper operation of the express backspace mechanism.

SOLUTION: Install the redesigned express backspace/CR arm (24-105), and shoe (24-111). A grip clip (24-106) is required for mounting the arm on the present installed inventory. (Machines manufactured above the specified S/N range, incorporate a redesigned mounting shaft (25-220) that utilizes the present "C"-clip). When installing the grip clip, maintain minimum side play (no binds) of the arm on the shaft.

ADJUSTMENTS: The following adjustments should be performed in the recommended sequence:

1. Form the express backspace keylever (24-108) so the keybutton assumes the same height as an adjacent character keybutton.
2. Adjust the pawl assembly (24-205) to the left for maximum slot adjustment (APM Frame 204) ("Selectric" III only).
3. Form the CR shoe arm for proper shoe overlap and contact with pinion spring (APM Frame 200).
4. Adjust the CR shoe to pinion clearance for .010"-.020" (3/4 to 1-1/2 turns from shoe engagement) (APM Frame 172).
5. Form the express backspace/CR arm lug to obtain CR shoe engagement with the pinion spring when the TOP of the keylever has traveled .035"–.050" from the TOP of the slot in the front keylever guide comb. Recheck APM Frame 172. (NOTE: This adjustment differs from that in APM Frame 202.)

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
24	105	1336414	Express Backspace/CR Shoe Arm	1	—
	111	1336412	Shoe (Blue)	1	
	106	1115633	Grip Clip	1	
	207	1287500	Express Backspace/ CR Shoe Arm B/M (Includes Qty. 1 Mech. 24, Ref. 105, 106, 111)	1	

MACHINES AFFECTED: Plant installed above approx. S/N Type 6701: 0014988; 6702: 1012839; 6703: 2029941; 6704: 3017964; 6705: 4419911; 6705: 5190268

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: The redesigned arm replaces all previous one-piece CR/exp. B/S shoe arms. The new shoe (blue) must be used on the new arm. The former lever shoe (white) remains available.

Estimated Installation Time: .2 Hr.

Use Service Code 33

This CEM Expires 3-1-83

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481 SERVICE INFORMATION

2-17-82
(Revised) 4-21-82

Type(s): 6700, 6701, 6705

SUBJECT: Announcement/Discontinuance – IBM "Selectric" III

Announcement of a new IBM Correcting "Selectric" III model 6700, and standardizing production of the "Selectric" III typewriter.

Discontinuance of the "Selectric" III models 6702, 6703 and 6704.

The "Selectric" III will be manufactured with standard machine features. The "Selectric" III model 6705 is also available with a limited amount of optional features. The model 6701 can be obtained by schools and Government customers only.

"SELECTRIC" III AND CORRECTING "SELECTRIC" III STANDARD TYPEWRITER FEATURES	MODEL 6700	MODEL 6701	MODEL 6705
Covers-Topaz Bronze		X	
(With Raven Black Bottom Cover)	X		X
Acoustical Filter Hood			X
Lighted Margin Scale			X
End of Page Indicator	X	X	X
Repeat Underscore	X	X	X
54 Tooth Indexing	X	X	X
Dual Pitch (Prestige Elite Element Only)			X
Ribbon Cassette	X		X
Fabric Ribbon		X	
Correcting Mechanism	X		X
Half Backspace			X
92 Character Keyboard US Correspondence	X	X	X
10 Pitch (W/Courier Element)		X	
12 Pitch (W/Prestige Elite Element)	X	X	
OPTIONAL FEATURES			
Additional Cover Colors (8) (With Raven Black Bottom Cover)			X
96 Character Keyboard (Choice of 4)			X
92 Character Library Keyboard			X
48 Tooth Indexing			X
Dead Key Disconnect (W/96 Char. Kybd.)			X
Manual Velocity (W/96 Char. Kybd.)			X
Modified Motor (Government Only)			X
Elements (Choice Of Any 2 Current Typestyles)			X

DISCONTINUED FEATURES

* Pin Feed Platen
* Court Reporter Platen
* Card Holding Platen
* OCR Manifold Platen
* Platen Indexing 24, 27, 31, 36 and 45T
* Double Indexing
* Handicapped Attachments
* Stroke Counter
* Ribbon Limiting Device
* Repeat Character (Row B)
* Shift Sensing
* 13 Foot Line Cord
* 3 Wire Line Cord
* Legal Page End Indicator
* Manual Velocity Control
9 Pitch
External Ribbon Control
All Other Keyboards
(No Field Conversions)
Special Color Covers

* These features can be field installed upon customer request at the current applicable rates.

Continued

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PAINTED COVER PARTS – "SELECTRIC" III

	MODEL	PEBBLE GRAY	TOPAZ BRONZE	LAUREL GREEN	AUTUMN RED	RAVEN BLACK	SABLE BROWN	MARLIN BLUE	COCOA BROWN
TOP COVER ASM.	6700 12P CORR	-	1336021	–	–	–	–	-	–
	6701 6702 10P	1336012	1336013	1336014	1336015	1336016	1336017	1336018	1336019
	6701-6702 12P	1336020	1336021	1336022	1336023	1336024	1336025	1336026	1336027
	6704 DP CORR	1336028	1336029	1336030	1336031	1336032	1336033	1336034	1336035
	6703 10P	1336036	1336037	1336038	1336039	1336040	1336041	1336042	1336043
	6703 12P	1336044	1336045	1336046	1336047	1336048	1336049	1336050	1336051
	6705 DP CORR	1336052	1336053	1336054	1336055	1336056	1336057	1336058	1336059
CENTER COVER ASM.	6700 12P CORR		1336925	–	–	–	–	–	
	6701 6702 SP	1336108	1336109	1336110	1336111	1336112	1336113	1336114	1336115
	6703 SP CORR	1336116	1336117	1336118	1336119	1336120	1336121	1336122	1336123
	6704 DP CORR	1336124	1336125	1336126	1336127	1336128	1336129	1336130	1336131
*	6705 DP CORR	1336132	1336133	1336134	1336135	1336136	1336137	1336138	1336139
BOTTOM COVER ASM.	6700		–	–	–	1336192	–	–	–
	6701 02-04	1336188	1336189	1336190	1336191	1336192	1336193	1336194	1336195
	6703-05	1336196	1336197	1336198	1336199	1336200	1336201	1336202	1336203
TOP AND CENTER COVER ASM.	6700 12P CORR	-	1336926		–		–	-	–
	6701 6702 10P	1336927	1336928	1336929	1336930	1336931	1336932	1336933	1336934
	6701 6702 12P	1336935	1336936	1336937	1336938	1336939	1336940	1336941	1336942
	6703 10P CORR	1336943	1336944	1336945	1336946	1336947	1336948	1336949	1336950
	6703 12P CORR	1336951	1336952	1336953	1336954	1336955	1336956	1336957	1336958
	6704 DP CORR	1336959	1336960	1336961	1336962	1336963	1336964	1336965	1336966
*	6705 DP CORR	1336967	1336968	1336969	1336970	1336971	1336972	1336973	1336974
TOP COVER ASM. SOUND REDUCTION	6701 2 10P	1336060	1336061	1336062	1336063	1336064	1336065	1336066	1336067
	6701 6702 12 P	1336068	1336069	1336070	1336071	1336072	1336073	1336074	1336075
	6704 DP CORR	1336076	1336077	1336078	1336079	1336080	1336081	1336082	1336083
	6703 10P	1336084	1336085	1336086	1336087	1336088	1336089	1336090	1336091
	6703 12P	1336092	1336093	1336094	1336095	1336096	1336097	1336098	1336099
	6705 DP CORR	1336100	1336101	1336102	1336103	1336104	1336105	1336106	1336107
CENTER COVER ASM. SOUND REDUCTION	6701-6702 SP	1336148	1336149	1336150	1336151	1336152	1336153	1336154	1336155
	6703 SP CORR	1336156	1336157	1336158	1336159	1336160	1336161	1336162	1336163
	6704 DP CORR	1336164	1336165	1336166	1336167	1336168	1336169	1336170	1336171
*	6705 DP CORR	1336172	1336173	1336174	1336175	1336176	1336177	1336178	1336179
BOTTOM COVER ASM. SOUND REDUCTION	6701 02-04	1336204	1336205	1336206	1336207	1336208	1336209	1336210	1336211
	6703-05	1336212	1336213	1336214	1336215	1336216	1336217	1336218	1336219
TOP AND CENTER COVER ASM. SOUND REDUCTION	6701 6702 10P	1336840	1336841	1336842	1336843	1336844	1336845	1336846	1336847
	6701-6702 12P	1336848	1336849	1336850	1336851	1336852	1336853	1336854	1336855
	6703 10P CORR	1336856	1336857	1336858	1336859	1336860	1336861	1336862	1336863
	6703 12P CORR	1336864	1336865	1336866	1336867	1336868	1336869	1336870	1336871
	6704 DP CORR	1336872	1336873	1336874	1336875	1336876	1336877	1336878	1336879
	6705 DP CORR	1336880	1336881	1336882	1336883	1336884	1336885	1336886	1336887

*Center section shipped with double insulated logo. Order 3 wire logo as required.

Parts Information: The "Selectric" III complete cover assemblies will no longer be available. When a complete cover asm. is required, order a top and center cover asm. and the appropriate bottom cover. (Figure 1)

NOTE: Until stock is depleted, orders for the top and center cover asm. will be filled with the complete cover asm.

Use Applicable Service Code

482 SERVICE INFORMATION

2-17-82

Type(s): 6700, 6705

SUBJECT: Announcement – IBM 210 Correctable Ribbon Cassette – IBM 800 T-III Ribbon Cassette

The "Selectric" III ribbon cartridge and ribbon mechanism have been redesigned to increase ribbon yield while offering the operator simplified ribbon loading. The following is a list of the design modifications and features of the new "Selectric" III Ribbon Cassette.

1. Four fewer ribbon mechanism adjustments.
2. Ribbon lift guide and shock wire are on the ribbon cassette.
3. Ribbon cassette replacement is simplified.
4. 38.6% higher character yield per correctable ribbon cassette.
5. 37.9% higher character yield per T-III cassette.
6. Thinner film ribbon and new ink formulation.

THEORY OF OPERATION

The method of operation of the lift and feed mechanisms are very similar to the selective ribbon with the exception of the redesigned lift guides and the T-III ribbon feed.

The lift guides are now part of the cassette. A return spring on the cassette keeps the guides spring loaded against the lift arms. The rest position of the lift arms is determined by forming an extension to the escapement bracket. The lift motion is provided in the same way as the earlier mechanism through the ribbon lift cam and ribbon lift follower. However, the ribbon lift cam and spread adjusting plate have been redesigned and are not compatible with the earlier mechanism.

The feed mechanism for the T-III ribbon has been altered by changing the ratio between the intermediate gear and the upper gear, giving approximately 38% higher character yield per T-III ribbon. The increased yield of the correctable film ribbon is due to the use of a thinner material which allows more ribbon to be wound on the spool.

The design and operation of the correcting mechanism remains unchanged, with the exception of a tape deflector which has been added to the tilt ring.

Field Upgrade

Customers requesting the ribbon cassette to be installed on their existing "Selectric" III should be referred to Marketing for price and availability. Orders will be handled on an MES basis only.

Parts

All ribbon cassette parts will be listed under new mechanism code 27. This CEM is to be used to reference parts, pending update of the APM.

Adjustments

The following adjustments are not required for the ribbon cassette mechanism:

Frame 316 — Shock Wire
Frame 319 — Shock Wire Disengage Lever
Frame 320 – Shock Wire Disengage Lever
Frame 324 — Load Lever
Frame 339 — L/H Ribbon Lift Guide

Continued

485 SERVICE INFORMATION

5-19-82

Types: 6126,6700,6701,6702,6703,6704,6705

SUBJECT: Paper Release Lever - Redesigned

The A-Frame paper release lever (22-267) has been changed to reduce breakage. Material has been removed to eliminate the interference between the cover and the paper release lever.

ADJUSTMENTS:
When used as a replacement part for the previous level lever, the feed roll clearance (APM Frame 254) and paper release (APM Frame 255) adjustments may be affected and should be checked.

MECH/REF		PART NO.	DESCRIPTION	QTY.
22	267	1256715	Paper Release Lever	1

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

486 SERVICE INFORMATION

5-19-82

Type: 6705

SUBJECT: SELECTRIC III - RIBBON CASSETTE

MACHINES AFFECTED:
Below Approx S/N model 6705 - 4448504; Model 6705 - 5205911.

Selectric III Ribbon Cassette machines below the specfied Serial Numbers do not have the vinyl tubes (27 - 319 and 07 - 122) installed as shown in CEM 482. The tubes may be installed as required to dampen the sound caused by the contact between the ribbon lift arms (27 - 320) and the extension of the escapement bracket (07 - 1) or the cardholder bracket mounting screw (27 - 114).

ADJUSTMENTS:
The ribbon lift height adjustment (Frame 314) and lift arm stop adjustment (Frame 315) shown in CEM 482 may be affected and should be checked after installation of the tubes.

MECH/REF		PART NO.	DESCRIPTION	QTY.
27	319	1359714	Vinyl Tube-Lift Arm	2
07	122	1359712	Vinyl Tube-Escapement Bkt	1

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

487 SERVICE INFORMATION

5-19-82

Types: 6121,6126,6700,6701,6702,6703,6704,6705

SUBJECT: KEYLEVER PAWL B/M

When using the keylever pawl B/M (21 - 30) to replace a keylever pawl, the stud may interfere with the adjacent keylever. The stud may be shortened on the unthreaded side by using the cutters or other suitable tool.

NOTE: Caution should be taken when removing material from the stud. Cover the part with a cloth to prevent flying fragments.

Use Applicable Service Code

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485 SERVICE INFORMATION

5-19-82

Types: 6126,6700,6701,6702,6703,6704,6705

SUBJECT: Paper Release Lever - Redesigned

The A-Frame paper release lever (22-267) has been changed to reduce breakage. Material has been removed to eliminate the interference between the cover and the paper release lever.

ADJUSTMENTS:
When used as a replacement part for the previous level lever, the feed roll clearance (APM Frame 254) and paper release (APM Frame 255) adjustments may be affected and should be checked.

MECH/REF		PART NO.	DESCRIPTION	QTY.
22	267	1256715	Paper Release Lever	1

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

486 SERVICE INFORMATION

5-19-82

Type: 6705

SUBJECT: SELECTRIC III - RIBBON CASSETTE

MACHINES AFFECTED:
Below Approx S/N model 6705 - 4448504; Model 6705 - 5205911.

Selectric III Ribbon Cassette machines below the specfied Serial Numbers do not have the vinyl tubes (27 - 319 and 07 - 122) installed as shown in CEM 482. The tubes may be installed as required to dampen the sound caused by the contact between the ribbon lift arms (27 - 320) and the extension of the escapement bracket (07 - 1) or the cardholder bracket mounting screw (27 - 114).

ADJUSTMENTS:
The ribbon lift height adjustment (Frame 314) and lift arm stop adjustment (Frame 315) shown in CEM 482 may be affected and should be checked after installation of the tubes.

MECH/REF		PART NO.	DESCRIPTION	QTY.
27	319	1359714	Vinyl Tube-Lift Arm	2
07	122	1359712	Vinyl Tube-Escapement Bkt	1

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

487 SERVICE INFORMATION

5-19-82

Types: 6121,6126,6700,6701,6702,6703,6704,6705

SUBJECT: KEYLEVER PAWL B/M

When using the keylever pawl B/M (21 - 30) to replace a keylever pawl, the stud may interfere with the adjacent keylever. The stud may be shortened on the unthreaded side by using the cutters or other suitable tool.

NOTE: Caution should be taken when removing material from the stud. Cover the part with a cloth to prevent flying fragments.

Use Applicable Service Code

488 RELIABILITY

7-28-82

Type(s): 6705

SUBJECT: CARRIER RETURN OPERATIONAL CAM PAWL – DEFECTIVE

MACHINES AFFECTED:
Below Approx. S/N Type 6705: 5200621

PURPOSE:
Some machines were manufactured with an improperly heat treated CR operational cam pawl (25-34).

SYMPTOM:
Loss of cam pawl to ratchet clearance caused by premature wear of the pin where it contacts the check ring (25-35) and/or early wear of the pawl tooth. (FIG I)

SOLUTION:
When experiencing this symptom check for this condition and replace the pawl. Inspect any other related parts and replace as necessary.

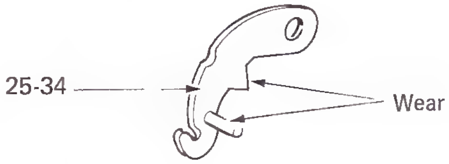

Figure I

PARTS INFORMATION:

MECH/REF		PART NO.	DESCRIPTION	QTY.
25	34	1128413	Pawl	1

Use Service Code 33

This CEM Expires 6-30-83

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489

SERVICE INFORMATION

7-28-82

Type(s): 6121, 6126, 6700, 6701, 6702, 6703,
6704, 6705

SUBJECT: PINFEED PLATEN PIN – REDESIGNED

The D-shaped pin (49-101), cam groove dimensions have been increased to produce an improved pin and cam operation. The new level pin can be identified by its gray color.

MECH/REF		PART NO.	DESCRIPTION	QTY.
49	101	1336740	Pin	1

PARTS INFORMATION:
Present stock of pinwheel assemblies (49-130) may not contain new level pins.

Use Applicable Service Code

490

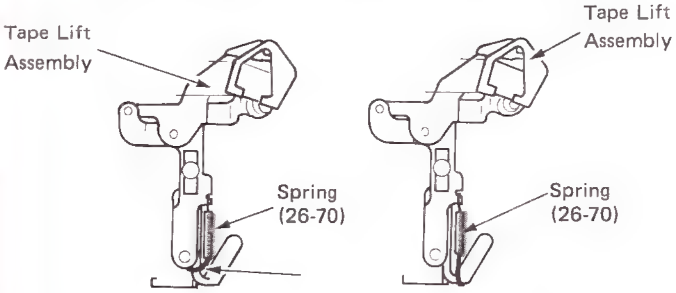
SERVICE INFORMATION

7-28-82

Type(s): 6126, 6700, 6703, 6704, 6705

SUBJECT: CORRECTION LIFT GUIDE RESTORE SPRING REDESIGNED

The correction lift guide restore spring (26-70) has been redesigned to prevent the bottom loop from contacting the D.I. cable or dust shield. The new shorter spring hooks in a corner of the lift bracket as shown in Figure 1.



NEW LEVEL OLD LEVEL

(Rear View)

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.
26	70	1256701	Spring	1

PARTS INFORMATION:
Current stock of the tape lift assembly (26-71) may utilize the previous level spring.

Use Applicable Service Code

IBM **CEM** Customer Engineers Memorandum
Customer Service Division

Group 259 "Selectric" Typewriter

480 RELIABILITY

2-10-82
(Revised) 5-19-82

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Carrier Return And Express Backspace Shoe Arm – Redesigned

PURPOSE: The thickness of the one piece CR shoe arm (24-105) has been increased by .012 to reduce the flex in the "Selectric" III express backspace mechanism.

SYMPTOM: Difficulty maintaining the required adjustments for proper operation of the express backspace mechanism.

SOLUTION: Install the redesigned express backspace/CR arm (24-105), and shoe (24-111). A grip clip (24-106) is required for mounting the arm on the present installed inventory. (Machines manufactured above the specified S/N range, incorporate a redesigned mounting shaft (25-220) that utilizes the present "C"-clip). When installing the grip clip, maintain minimum side play (no binds) of the arm on the shaft.

ADJUSTMENTS: The following adjustments should be performed in the recommended sequence:

1. Form the express backspace keylever (24-108) so the keybutton assumes the same height as an adjacent character keybutton.
2. Adjust the pawl assembly (24-205) to the left for maximum slot adjustment (APM Frame 204) ("Selectric" III only).
3. Form the CR shoe arm for proper shoe overlap and contact with pinion spring (APM Frame 200).
4. Adjust the CR shoe to pinion clearance for .010"-.020" (3/4 to 1-1/2 turns from shoe engagement) (APM Frame 172).
5. Form the express backspace/CR arm lug to obtain CR shoe engagement with the pinion spring when the TOP of the keylever has traveled .035"-.050" from the TOP of the slot in the front keylever guide comb. Recheck APM Frame 172. (NOTE: This adjustment differs from that in APM Frame 202.)

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
24	105	1336414	Express Backspace/CR Shoe Arm	1	—
	111	1336412	Shoe (Blue)	1	
	106	1115633	Grip Clip	1	
	207	1287500	Express Backspace/ CR Shoe Arm B/M (Includes Qty. 1 Mech. 24, Ref. 105, 106, 111)	1	

MACHINES AFFECTED: Plant installed above approx. S/N Type 6701: 0014988; 6702: 1012839; 6703: 2029941; 6704: 3017964; 6705: 4419911; 6705: 5190268

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: The redesigned arm replaces all previous one-piece CR/exp. B/S shoe arms. The new shoe (blue) must be used on the new arm. The former lever shoe (white) remains available.

Estimated Installation Time: .2 Hr.

Use Service Code 33

This CEM Expires 3-1-83

481 SERVICE INFORMATION

2-17-82
(Revised) 9-8-82

Type(s): 6700, 6701, 6705

SUBJECT: Announcement/Discontinuance – IBM "Selectric" III

Announcement of a new IBM Correcting "Selectric" III model 6700, and standardizing production of the "Selectric" III typewriter.

Discontinuance of the "Selectric" III models 6702, 6703 and 6704.

The "Selectric" III will be manufactured with standard machine features. The "Selectric" III model 6705 is also available with a limited amount of optional features. The model 6701 can be obtained by schools and Government customers only.

"SELECTRIC" III AND CORRECTING "SELECTRIC" III STANDARD TYPEWRITER FEATURES	MODEL 6700	6701	6705
Covers-Topaz Bronze		X	
(With Raven Black Bottom Cover)	X		X
Acoustical Filter Hood			X
Lighted Margin Scale			X
End of Page Indicator	X	X	X
Repeat Underscore	X	X	X
54 Tooth Indexing	X	X	X
Dual Pitch (Prestige Elite Element Only)			X
Ribbon Cassette	X		X
Fabric Ribbon		X	
Correcting Mechanism	X		X
Half Backspace			X
92 Character Keyboard US Correspondence	X	X	X
10 Pitch (W/Courier Element)		X	
12 Pitch (W/Prestige Elite Element)	X	X	
OPTIONAL FEATURES			
Additional Cover Colors (8) (With Raven Black Bottom Cover)			X
96 Character Keyboard (Choice of 4)			X
92 Character Keyboard (Choice of 2)			X
48 Tooth Indexing			X
Dead Key Disconnect (W/96 Char. Kybd.)			X
Manual Velocity (W/96 Char. Kybd.)			X
Modified Motor (Government Only)			X
Elements (Choice Of Any 2 Current Typestyles)			X

DISCONTINUED FEATURES

- * Pin Feed Platen
- * Court Reporter Platen
- * Card Holding Platen
- * OCR Manifold Platen
- * Platen Indexing 24, 27, 31, 36 and 45T
- * Double Indexing
- * Handicapped Attachments
- * Stroke Counter
- * Ribbon Limiting Device
- * Repeat Character (Row B)
- * Shift Sensing
- * 13 Foot Line Cord
- * 3 Wire Line Cord
- * Legal Page End Indicator
- * Manual Velocity Control
- 9 Pitch
- External Ribbon Control
- All Other Keyboards (No Field Conversions)
- Special Color Covers

* These features can be field installed upon customer request at the current applicable rates.

Continued

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PAINTED COVER PARTS – "SELECTRIC" III

	MODEL	PEBBLE GRAY	TOPAZ BRONZE	LAUREL GREEN	AUTUMN RED	RAVEN BLACK	SABLE BROWN	MARLIN BLUE	COCOA BROWN
TOP COVER ASM.	6700 12P CORR		1336021	–	–	–	–	–	–
	6701 6702 10P	1336012	1336013	1336014	1336015	1336016	1336017	1336018	1336019
	6701 6702 12P	1336020	1336021	1336022	1336023	1336024	1336025	1336026	1336027
	6704 DP CORR	1336028	1336029	1336030	1336031	1336032	1336033	1336034	1336035
	6703 10P	1336036	1336037	1336038	1336039	1336040	1336041	1336042	1336043
	6703 12P	1336044	1336045	1336046	1336047	1336048	1336049	1336050	1336051
	6705 DP CORR	1336052	1336053	1336054	1336055	1336056	1336057	1336058	1336059
CENTER COVER ASM.	6700 12P CORR	–	1336925	–	–	–	–	–	–
	6701 6702 SP	1336108	1336109	1336110	1336111	1336112	1336113	1336114	1336115
	6703 SP CORR	1336116	1336117	1336118	1336119	1336120	1336121	1336122	1336123
	6704 DP CORR	1336124	1336125	1336126	1336127	1336128	1336129	1336130	1336131
*	6705 DP CORR	1336132	1336133	1336134	1336135	1336136	1336137	1336138	1336139
BOTTOM COVER ASM.	6700	–	–	–	–	1336192	–	–	–
	6701-02 04	1336188	1336189	1336190	1336191	1336192	1336193	1336194	1336195
	6703-05	1336196	1336197	1336198	1336199	1336200	1336201	1336202	1336203
TOP AND CENTER COVER ASM.	6700 12P CORR	–	1336926	–	–	–	–	–	–
	6701 6702 10P	1336927	1336928	1336929	1336930	1336931	1336932	1336933	1336934
	6701-6702 12P	1336935	1336936	1336937	1336933	1336939	1336940	1336941	1336942
	6703 10P CORR	1336943	1336944	1336945	1336946	1336947	1336948	1336949	1336950
	6703 12P CORR	1336951	1336952	1336953	1336954	1336955	1336956	1336957	1336958
	6704 DP CORR	1336959	1336960	1336961	1336962	1336963	1336964	1336965	1336966
*	6705 DP CORR	1336967	1336968	1336969	1336970	1336971	1336972	1336973	1336974
TOP COVER ASM. SOUND REDUCTION	6701-2 10P	1336060	1336061	1336062	1336063	1336064	1336065	1336066	1336067
	6701 6702 12 P	1336068	1336069	1336070	1336071	1336072	1336073	1336074	1336075
	6704 DP CORR	1336076	1336077	1336078	1336079	1336080	1336081	1336082	1336083
	6703 10P	1336084	1336085	1336086	1336087	1336088	1336089	1336090	1336091
	6703 12P	1336092	1336093	1336094	1336095	1336096	1336097	1336098	1336099
	6705 DP CORR	1336100	1336101	1336102	1336103	1336104	1336105	1336106	1336107
CENTER COVER ASM. SOUND REDUCTION	6701-6702 SP	1336148	1336149	1336150	1336151	1336152	1336153	1336154	1336155
	6703 SP CORR	1336156	1336157	1336158	1336159	1336160	1336161	1336162	1336163
	6704 DP CORR	1336164	1336165	1336166	1336167	1336168	1336169	1336170	1336171
*	6705 DP CORR	1336172	1336173	1336174	1336175	1336176	1336177	1336178	1336179
BOTTOM COVER ASM. SOUND REDUCTION	6701-02-04	1336204	1336205	1336206	1336207	1336208	1336209	1336210	1336211
	6703-05	1336212	1336213	1336214	1336215	1336216	1336217	1336218	1336219
TOP AND CENTER COVER ASM. SOUND REDUCTION	6701-6702 10P	1336840	1336841	1336842	1336843	1336844	1336845	1336846	1336847
	6701-6702 12P	1336848	1336849	1336850	1336851	1336852	1336853	1336854	1336855
	6703 10P CORR	1336856	1336857	1336858	1336859	1336860	1336861	1336862	1336863
	6703 12P CORR	1336864	1336865	1336866	1336867	1336868	1336869	1336870	1336871
	6704 DP CORR	1336872	1336873	1336874	1336875	1336876	1336877	1336878	1336879
*	6705 DP CORR	1336880	1336881	1336882	1336883	1336884	1336885	1336886	1336887

*Center section shipped with double insulated logo. Order 3 wire logo as required.

Parts Information: The "Selectric" III complete cover assemblies will no longer be available. When a complete cover asm. is required, order a top and center cover asm. and the appropriate bottom cover. (Figure 1)

NOTE: Until stock is depleted, orders for the top and center cover asm. will be filled with the complete cover asm.

Use Applicable Service Code

482 SERVICE INFORMATION 2-17-82

Type(s): 6700, 6705 (Revised) 9-8-82

SUBJECT: Announcement – IBM 210 Correctable Ribbon Cassette – IBM 800 T-III Ribbon Cassette

The "Selectric" III ribbon cartridge and ribbon mechanism have been redesigned to increase ribbon yield while offering the operator simplified ribbon loading. The following is a list of the design modifications and features of the new "Selectric" III Ribbon Cassette.

1. Four fewer ribbon mechanism adjustments.
2. Ribbon lift guide and shock wire are on the ribbon cassette.
3. Ribbon cassette replacement is simplified.
4. 38.6% higher character yield per correctable ribbon cassette.
5. 37.9% higher character yield per T-III cassette.
6. Thinner film ribbon and new ink formulation.

THEORY OF OPERATION

The method of operation of the lift and feed mechanisms are very similar to the selective ribbon with the exception of the redesigned lift guides and the T-III ribbon feed.

The lift guides are now part of the cassette. A return spring on the cassette keeps the guides spring loaded against the lift arms. The rest position of the lift arms is determined by forming an extension to the escapement bracket. The lift motion is provided in the same way as the earlier mechanism through the ribbon lift cam and ribbon lift follower. However, the ribbon lift cam and spread adjusting plate have been redesigned and are not compatible with the earlier mechanism.

The feed mechanism for the T-III ribbon has been altered by changing the ratio between the intermediate gear and the upper gear, giving approximately 38% higher character yield per T-III ribbon. The increased yield of the correctable film ribbon is due to the use of a thinner material which allows more ribbon to be wound on the spool.

The design and operation of the correcting mechanism remains unchanged, with the exception of a tape deflector which has been added to the tilt ring.

Field Upgrade

Customers requesting the ribbon cassette to be installed on their existing "Selectric" III should be referred to Marketing for price and availability. Orders will be handled on an MES basis only.

Parts

All ribbon cassette parts will be listed under new mechanism code 27. This CEM is to be used to reference parts, pending update of the APM.

Adjustments

The following adjustments are not required for the ribbon cassette mechanism:

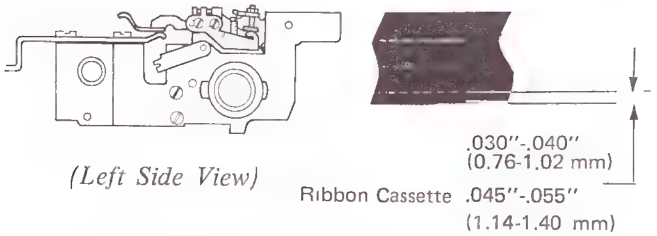
Frame 316 — Shock Wire
Frame 319 — Shock Wire Disengage Lever
Frame 320 — Shock Wire Disengage Lever
Frame 324 — Load Lever
Frame 339 — L/H Ribbon Lift Guide

Continued

(CEM No. 482 Continued)

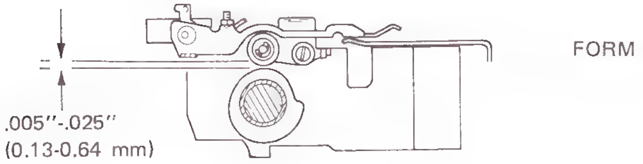
The following adjustments are changed:

Frame 314 — Lift Height



(Left Side View)

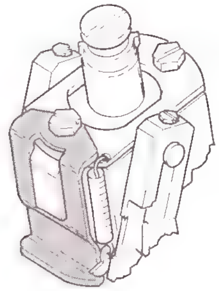
Frame 315 — Lift Arm Stop (Ribbon Cassette)
"For RC Only — Form Stop On Escapement Bracket"

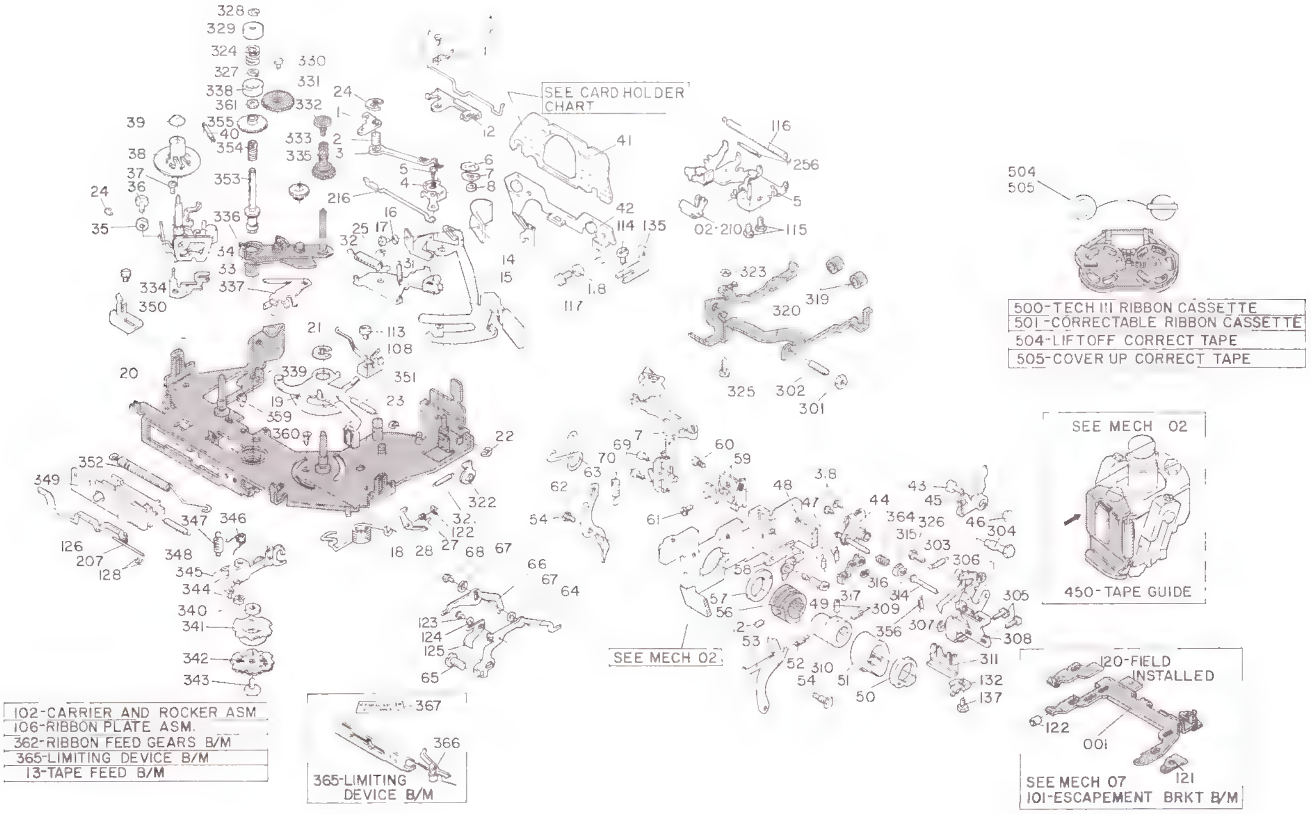


(Right Side View)

The following adjustment is added:

Tape Deflector — Adjust the deflector against the tilt ring.





1. Shaded parts are unique to Ribbon Cassette mechanism.

Continued

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(CEM No. 482 Continued)

MECH/REF.		PART NO.	DESCRIPTION	QTY.	PRICE
27	1	1206022	Bellcrank		
	2	1206020	Spring Fd. Blk.		
	3	1206037	Detent		
	4	1290655	Pawl		
	5	1290653	Screw		
	6	1206012	Wheel, Spiked		
	7	1206033	Washer		
	8	1206014	Spacer		
	9	1206016	Wire, Separator		
	10	48594	Screw		
	11	1206372	Spring		
	12	1206017	Support		
	13	1279490	Pawl — Feed B/M (Inc. Ref. 4, 5, & 216)		
	14	1206882	Guide, Corr. Tape		
	15	1206009	Lever Tape		
	16	1135663	Washer		
	17	1206145	Screw		
	18	1206018	Spring		
	19	1206007	Lever Ribbon Load		
	20	1359633*	Plate, Ribbon		
	21	257982	Retainer		
	22	1103695	Retainer		
	23	219633	Retainer		
	24	1073418	Retainer		
	25	1092125	Retainer		
	27	1206853	Spring		
	28	1359632*	Load Lever Latch		
	30	1206021	Arm, Swing		
	31	1164938	Spring		
	32	1206004	Spring, Sw. Arm		
	33	1206092	Fork Cradle		
	34	1287340	Cradle Asm.		
	35	1072477	Washer		
	36	1206166	Stud		
	37	38261	Screw		
	38	1256182	Ratchet, Supply		
	39	1206083	Cap. Ratchet		
	40	1116729	Spring, Low Bias		
	41	1206424	Cardholder		
		1206368	Cardholder, Pin Feed		
	42	1206219	Bkt. L/H Mounting		
	43	1090007	Stud		
	44	1206040	Follower, Ribbon		
	45	1290568	Follower, Feed		
	46	1206065	Hub, Follower		
	47	1206319	Spring		
	48	1171923	Spring		
	49	1206047	Stud		
	50	1464823	Cam, Tape Feed		
	51	1206046	Cam, Print/Corr.		
	52	1071687	Spring, Inhibit.		
	53	1290579	Inhibitor, Tape Feed		
	54	1206163	Stud		
	55	1290577	Vel. Bkt. Dual Transport		
		1141624	Vel. Bkt. All Nylon Transp.		
	56	1359730*	Cam Ribbon Lift		
	57	1206045	Cam, Tape Lift		
	58	1206044	Follower, Lift		
	59	1206188	Bkt. Cable Guide With Tubing		
	60	1206186	Screw		
	61	1206422	Screw		
	62	1290574	Arm, Actuating		
	63	1206146	Spring		
	64	1290580	Arm, Lift		
	65	1206165	Stud, Lift Arm		
	66	1290595	Arm		
	67	1132211	Washer		
	68	1206809	Screw Lift Asm.		
	69	1206204	Screw		
	70	1206054	Spring		
	71	1206048	Lift Guide		
	102	1359643*	Carrier and Rocker Asm.		
	106	1359640*	Ribbon Plate Asm.		
	108	1206034	Retainer, R.H.		
	112	1164096	Screw, Lift Cam		
	113	1164291	Screw, Cart. Ret.		
	114	1164027	Screw, Sel. Ribbon		
	115	1164580	Screw, Bkt. Mtg.		
	116	1204553	Shock Spring		
	117	1172397	Screw, Sel. Ribbon		
	118	1138796	Washer		
	122	1073418	Clip		
	123	1172397	Screw, Lift Arm Stop		
	124	1290605	Washer, Lift Arm Stop		
	125	1290599	Stop, Lift Arm		
	126	1290578	Bellcrank, Inhib.		
	128	251989	Retainer		
	132	1290601	Guide, Torque Bar		
	135	1206642	Bkt., Sel. Ribbon		
	137	1147429	Screw, T/B Guide		
	207	1290600	Pin, Inhib. Act. Bellcrank		
	216	1290654	Link		
	256	1123827	Spring		
	301	6503	Nut, Lock		
	302	1206556	Screw, Lift Piv.		
	303	1206510	Spring, Fd. Pawl		
	304	1206623	Follower, Feed		
	305	1164939	Screw, Fol. Bkt.		
	306	1290572	Asm, Fd. Cam Fol.		
	307	219633	Clip, Pin Ret.		
	308	1290581	Bkt, Rib. Feed		
	309	1164096	Screw, Fd. Cam		
	310	1164095	Cam. Rib. Fd.		
	311	1164435	Pad, Carr. Support		
	314	1290582	Pin 7/8", Shouldered		
	315	1206517	Roller, Cam Fol.		
	316	219633	Clip, Roll Ret.		
	317	1359729*	Plate Adj.		
	318	1206703	Screw, Plt. Mtg.		
	319	1359714*	Tube		
	320	1359715*	Arm Lift — Sound Reduct.		
		1359563*	Arm, Lift		
	321	1206617	Spring, Wobbler		
	322	1206585	Eccentric, Wob.		
	323	2114985	Nut, Lf. Cr. Loc.		
	324	1206513	Spring Mode		
	325	1206619	Screw, Lift Adj.		
	326	1206605	Screw, Fd. Foll.		
	327	1118361	Retainer, Mode		
	328	219633	Clip, Mode		
	329	1206515	Button, Mode		
	330	1206549	Screw, Int. Gear		
	331	1359638*	Gear, Int.		
	332	1359787*	Screw, Spiked Driver		
	333	1359677*	Spiked Driver		
	334	1164291	Screw, Carr. Ret.		
	335	1206596	Gear, Int.		
	336	1359679*	Swing, Arm		
	337	1206618	Bellcrank, Wobb.		
	338	1206515	Button, Mode		
	339	1206649	Handle Load		
	340	1206692	Washer, Wob. Cam		
	341	1206613	Cam, Wobbler		
	342	1206205	Wheel, Fd. And Lift		
	343	1206537	Screw, Fd.		
	344	264641	Clip, Lift Con.		
	345	1206583	Lever		
	346	1206702	Spring Lift Lev.		
	347	1206560	Spring, Lift Arm		
	348	1091670	Spring, Stencil		
	349	1206598	Lever, Stencil		
	350	1206512	Spring, Ret L.H.		
	351	1206650	Spring Load Lever		
	352	1206562	Spring, Swg. Arm		
	353	1206551	Post, Rib. Fd.		
	354	1206518	Spring, Fd. Gear		
	355	1206697	Gear, Lower		
	356	1164938	Spring		
	359	1164580	Screw, Plate L.H.		
	360	1175097	Screw, Plate R.H.		
	361	1359637*	Gear, Upper		
	362	1359694*	Fd. Grs. B/M		
	364	1359782*	Spring, Lift Follower		
	365	1359722*	B/M, Film Ribbon Lockout		
	366	1206488	Load Latch (Lockout)		
	367	1206491	Label (Lockout)		
02	450	1440012*	Tape Guide RC		
	130	1359643*	Carrier And Rocker RC		
07	001	1359681*	Bkt. Escapement RC *1*		
	101	1359686*	Bkt. Asm. Escapement RC *1*		
	120	1359558*	L.H. Ribbon Stop Bkt. (FI Only)		
	121	1359559*	Corr. Feed Restoring Spring Bkt. (FI Only)		
	122	1359712*	Tube, Downstop		

*Unique To Ribbon Cassette Mechanism.

1 If the L.H. Lift Arm Stop breaks, replace with field fix part ref. 120.

483 SERVICE INFORMATION

2-24-82

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Ribbon Feed Cam Follower Asm.

PURPOSE: Selective ribbon machines are now manufactured with the same ribbon feed cam follower, FTB (15-010) as is used in Electronic Typewriter. A new pin (15-019) is required to mount the follower. (Figure 1 illustrates the old and new pin).

The former level follower is no longer available. If replacement is required, order both the new follower and pin. Old level pins remain available.

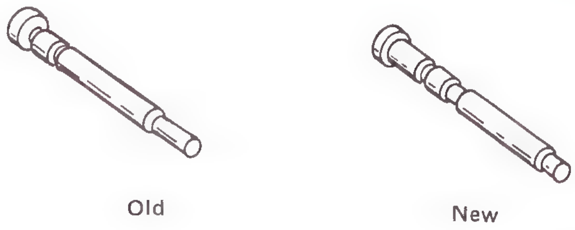

Figure 1

Continued

485 SERVICE INFORMATION

5-19-82

Types: 6126,6700,6701,6702,6703,6704,6705

SUBJECT: Paper Release Lever - Redesigned

The A-Frame paper release lever (22-267) has been changed to reduce breakage. Material has been removed to eliminate the interference between the cover and the paper release lever.

ADJUSTMENTS:
When used as a replacement part for the previous level lever, the feed roll clearance (APM Frame 254) and paper release (APM Frame 255) adjustments may be affected and should be checked.

MECH/REF		PART NO.	DESCRIPTION	QTY.
22	267	1256715	Paper Release Lever	1

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

486 SERVICE INFORMATION

5-19-82

Type: 6705

SUBJECT: SELECTRIC III - RIBBON CASSETTE

MACHINES AFFECTED:
Between Approx S/N Type 6705 - 4000001—4448504; type 6705 - 5000001—5205911.

Selectric III Ribbon Cassette machines between the specified Serial Numbers do not have the vinyl tubes (27 - 319 and 07 - 122) installed as shown in CEM 482. The tubes may be installed as required to dampen the sound caused by the contact between the ribbon lift arms (27 - 320) and the extension of the escapement bracket (07 - 1) or the cardholder bracket mounting screw (27 - 114).

ADJUSTMENTS:
The ribbon lift height adjustment (Frame 314) and lift arm stop adjustment (Frame 315) shown in CEM 482 may be affected and should be checked after installation of the tubes.

MECH/REF		PART NO.	DESCRIPTION	QTY.
27	319	1359714	Vinyl Tube-Lift Arm	2
07	122	1359712	Vinyl Tube-Escapement Bkt	1

Use Applicable Service Code

This CEM Expires 6-30-83

487 SERVICE INFORMATION

5-19-82

Types: 6121,6126,6700,6701,6702,6703,6704,6705

SUBJECT: KEYLEVER PAWL B/M

When using the keylever pawl B/M (21 - 30) to replace a keylever pawl, the stud may interfere with the adjacent keylever. The stud may be shortened on the unthreaded side by using the cutters or other suitable tool.

NOTE: Caution should be taken when removing material from the stud. Cover the part with a cloth to prevent flying fragments.

Use Applicable Service Code

488 RELIABILITY

7-28-82

Type(s): 6705

SUBJECT: CARRIER RETURN OPERATIONAL CAM PAWL — DEFECTIVE

MACHINES AFFECTED:
Below Approx. S/N Type 6705: 5200621

PURPOSE:
Some machines were manufactured with an improperly heat treated CR operational cam pawl (25-34).

SYMPTOM:
Loss of cam pawl to ratchet clearance caused by premature wear of the pin where it contacts the check ring (25-35) and/or early wear of the pawl tooth. (FIG I)

SOLUTION:
When experiencing this symptom check for this condition and replace the pawl. Inspect any other related parts and replace as necessary.

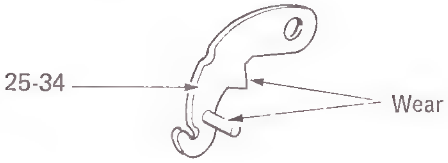

Figure I

PARTS INFORMATION:

MECH/REF		PART NO.	DESCRIPTION	QTY.
25	34	1128413	Pawl	1

Use Service Code 33

This CEM Expires 6-30-83

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489 SERVICE INFORMATION 7-28-82

Type(s): 6121, 6126, 6700, 6701, 6702, 6703, 6704, 6705

SUBJECT: PINFEED PLATEN PIN – REDESIGNED

The D-shaped pin (49-101), cam groove dimensions have been increased to produce an improved pin and cam operation. The new level pin can be identified by its gray color.

MECH/REF		PART NO.	DESCRIPTION	QTY.
49	101	1336740	Pin	1

PARTS INFORMATION:
Present stock of pinwheel assemblies (49-130) may not contain new level pins.

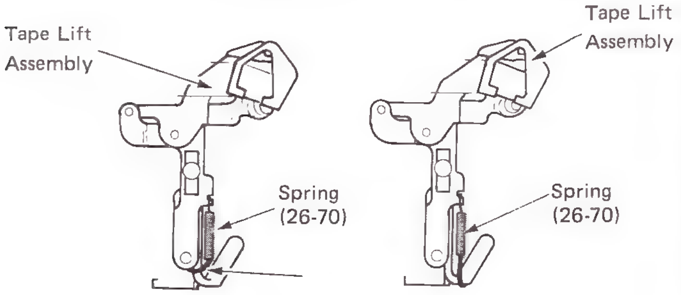
Use Applicable Service Code

490 SERVICE INFORMATION 7-28-82

Type(s): 6126, 6700, 6703, 6704, 6705

SUBJECT: CORRECTION LIFT GUIDE RESTORE SPRING REDESIGNED

The correction lift guide restore spring (26-70) has been redesigned to prevent the bottom loop from contacting the D.I. cable or dust shield. The new shorter spring hooks in a corner of the lift bracket as shown in Figure 1.



NEW LEVEL OLD LEVEL

(Rear View) Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.
26	70	1256701	Spring	1

PARTS INFORMATION:
Current stock of the tape lift assembly (26-71) may utilize the previous level spring.

Use Applicable Service Code

491 SERVICE INFORMATION 9-8-82

Type(s): 6126, 6703, 6705

SUBJECT: MODE ACTUATING BELLCRANK AND CORRECTION MODE LATCH–REDESIGNED

MACHINES AFFECTED:
Above Approx. S/N 6126 (8x5): 6988654; 6703: 2036200; 6705: 4508800.

The mode actuating bellcrank (26–80) and latch (26–82) have been redesigned to facilitate manufacturing. Field adjustments are not affected. The redesigned parts are not interchangeable with previous level parts. Former level parts remain available.

MECH/REF		PART NO.	DESCRIPTION	QTY
26	80	1336752	Bellcrank	1
26	82	1336753	"O" latch	1

Use Applicable Service Code

492 RELIABILITY 9-8-82

Type(s): 6121, 6126, 6700, 6701, 6702, 6703, 6704, 6705

SUBJECT: PLATEN VARIABLE–ENGAGEMENT

MACHINES AFFECTED:
Between Approx. S/N Type 6121: 1002661–1021336; 6126 (8x3): 5316190–5316490; 6126 (8x5): 6958180–6990937; 6700&6701: 0014389–0020734; 6702: 1012831–1015744; 6703: 2029754–2035306; 6704: 3017877–3021150; 6705: 4418833–4494819

Some machines were manufactured with the potential of preventing the platen driver from fully engaging the platen. This may be caused by either an interference between the cavity in the platen end plug and the washer (12-23) – fig. 1, or small pieces of plastic end plug material that may become lodged between the driver (12-24) and the end plug serrations. If experiencing this condition, clean out the platen end plug and replace the existing washer with the current smaller diameter washer PN1359915.

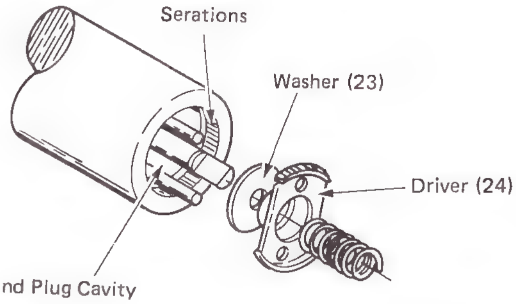


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.
12	23	1359915	Washer	1

Use Service Code 33

This CEM Expires 9-8-83

CEM Customer Engineers Memorandum **Group 259** **"Selectric" Typewriter**

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493 SERVICE INFORMATION 9-8-82

Type(s): 6700, 6705

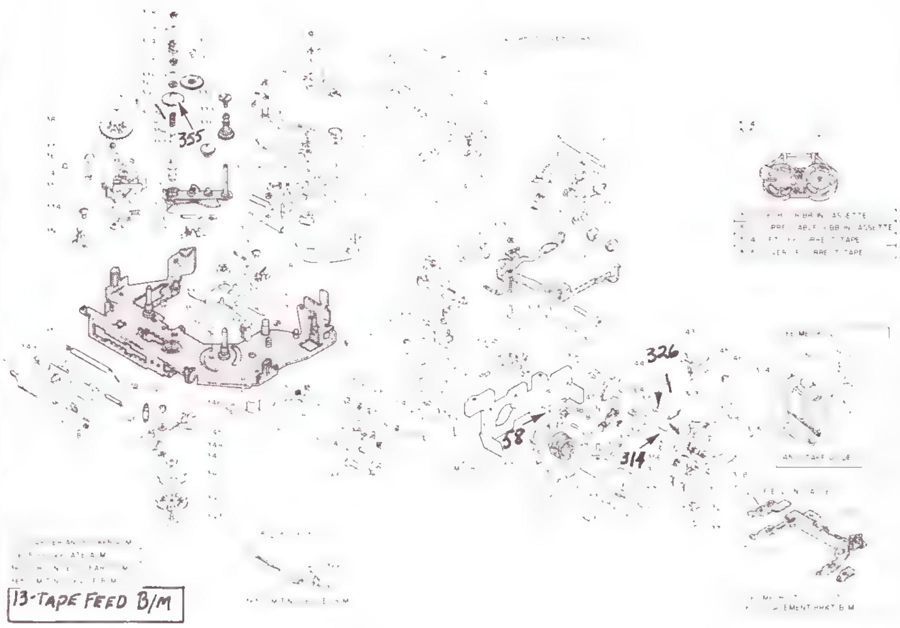
SUBJECT: APM CORRECTION - RIBBON CASSETTE

Mark the following changes to the mechanism 27 attachment of your APM.

Change Ref. 92 to 355
Change Ref. 19 to 314
Change Ref. 31 to 326
Add Ref. 58
Add Ref. 13

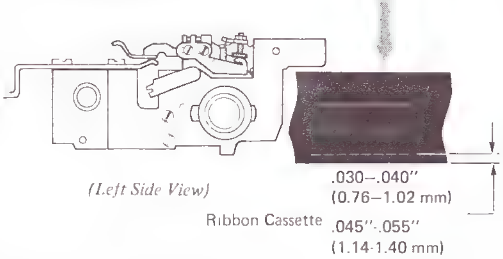
RIBBON CASSETTE

MECH. CODE 27

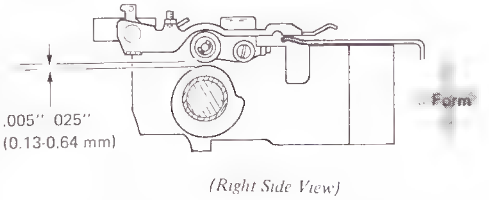


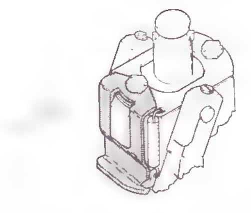
1. Attach this insert on last page of APM S241 5939 3.
2. Shaded parts are unique to Ribbon Cassette Mechanism

Frame 314 Lift Height



Frame 315 – Lift Arm Stop (Ribbon Cassette)
"For RC Only–Form Stop On Escapement Bracket"





Tape Deflector--Adjust the deflector against the tilt ring

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IBM CEM Customer Engineers Memorandum
Customer Service Division

Group 259

"Selectric" Typewriter

493 SERVICE INFORMATION 9-8-82

Type(s): 6700, 6705

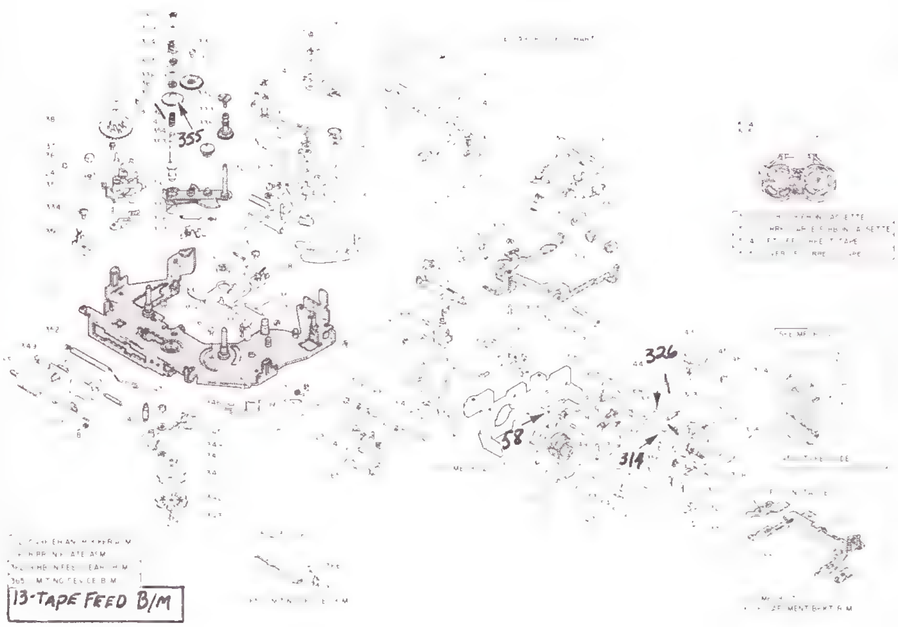
SUBJECT: APM CORRECTION - RIBBON CASSETTE

Mark the following changes to the mechanism 27 attachment of your APM.

Change Ref. 92 to 355
Change Ref. 19 to 314
Change Ref. 31 to 326
Add Ref. 58
Add Ref. 13

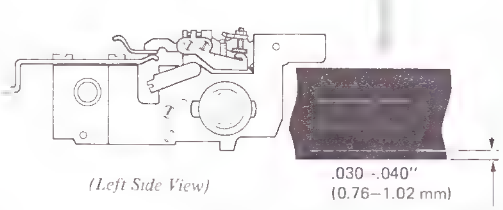
RIBBON CASSETTE

MECH. CODE
27



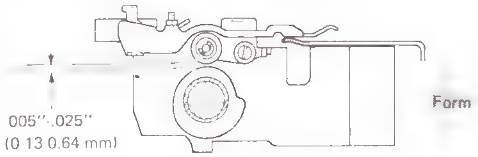
1. Attach this insert on last page of APM S241 5939 3
2. Shaded parts are unique to Ribbon Cassette Mechanism

Frame 314 Lift Height

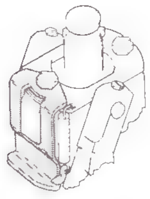


(Left Side View)

Frame 315 – Lift Arm Stop (Ribbon Cassette)
"For RC Only -Form Stop On Escapement Bracket"



(Right Side View)



Tape Deflector Adjust the deflector against the tilt ring

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494 SERVICE INFORMATION

10-6-82

Type(s): 6121, 6126, 6700, 6701, 6702, 6703, 6704, 6705

SUBJECT: INDEX LINK REDESIGNED

The lower end of the index link (20-403) has been changed to improve reliability. The new link utilizes an offset in place of the permanently mounted clevis. The new link may be installed by first removing the trigger restore spring (07-41). Install the offset end of the link as shown in figure 1. Then attach the clevis to the link from the top of the machine.

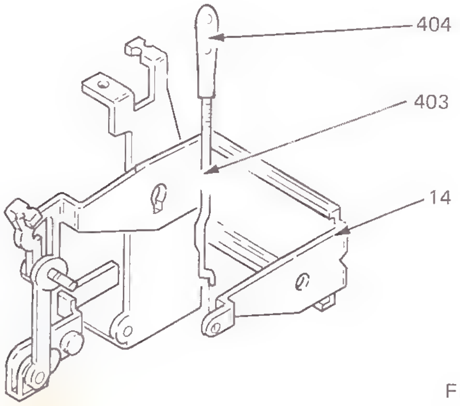

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.
20	403	1336479	Link	1

PARTS INFORMATION:
The previous level link will no longer be available.

Use Applicable Service Code

495 SERVICE INFORMATION

10-6-82

Type(s): 6705

SUBJECT: NEW BOTTOM COVER – PLASTIC

The Selectric III model 6705 is currently being manufactured with a black plastic bottom cover (30-155). The new plastic cover can be used as a replacement for the old metal cover.

When converting from a metal bottom cover to a plastic bottom cover, check for a possible interference between the bottom cover and the center cover. A limited number of center covers (30-156) were manufactured with a rib that may contact the front guide lug on the plastic bottom cover (Fig 1). This interference can be eliminated by filing enough material from the front bottom cover plastic guide lugs to allow proper assembly (Fig 2).

The metal bottom cover will remain available. The plastic bottom cover is not recommended for use with the modified government motor.

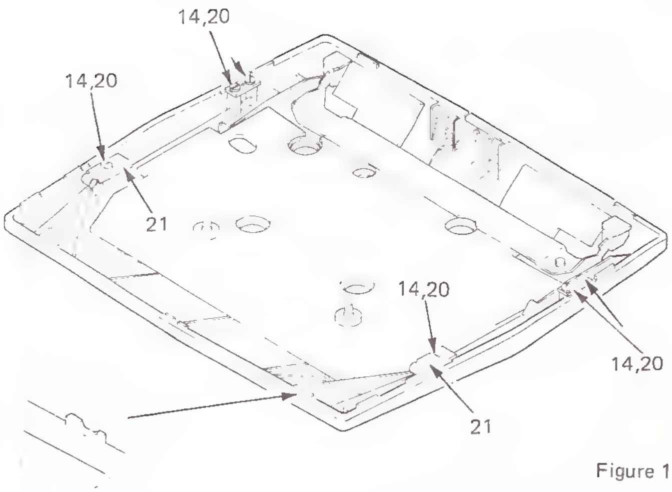

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.
05	11	1359837	Pad, shock mount	1
	14	1449391	Screw	1
	20	1449391	Screw	1
	21	1359833	Upstop, cover latch	1
	62	1359836	Bracket, shock mount	1
	101	1359834	Insul, pad	1
	106	1359839	Bottom cover asm.	1
30	155	1359839	Bottom cover asm.	1

Use Applicable Service Code

IBM **CEM** Customer Engineers Memorandum

Customer Service Division

Group 259 **"Selectric" Typewriter**

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493 SERVICE INFORMATION 9-8-82

Type(s): 6700, 6705

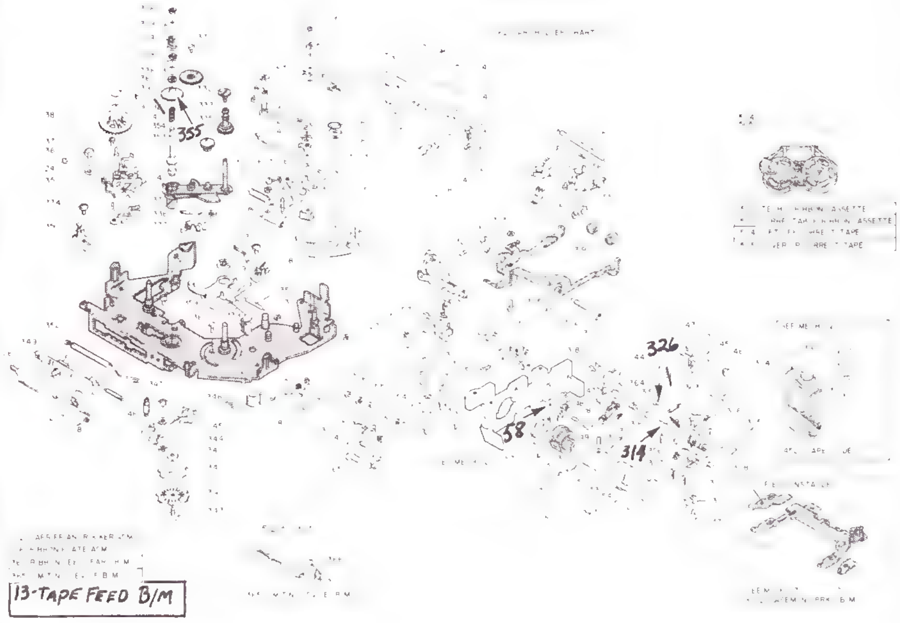
SUBJECT: APM CORRECTION - RIBBON CASSETTE

Mark the following changes to the mechanism 27 attachment of your APM.

Change Ref. 92 to 355
Change Ref. 19 to 314
Change Ref. 31 to 326
Add Ref. 58
Add Ref. 13

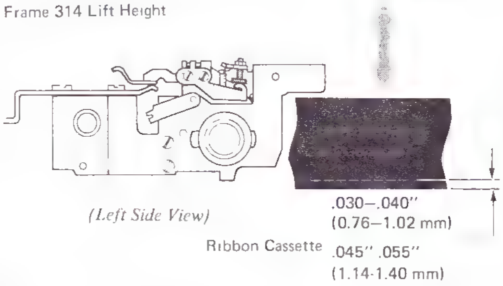
RIBBON CASSETTE

MECH. CODE 27

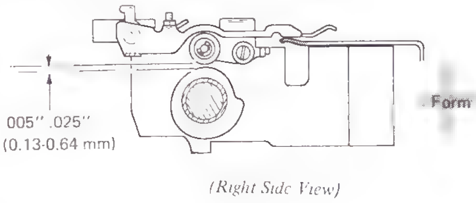


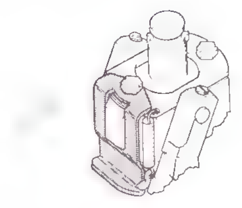
1. Attach this insert on last page of APM S241 5939 3
2 Shaded parts are unique to Ribbon Cassette Mechanism

Frame 314 Lift Height



Frame 315 – Lift Arm Stop (Ribbon Cassette)
"For RC Only Form Stop On Escapement Bracket"





Tape Deflector—Adjust the deflector against the tilt ring

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494 SERVICE INFORMATION

10-6-82

Type(s): 6121, 6126, 6700, 6701, 6702, 6703,
6704, 6705

SUBJECT: INDEX LINK REDESIGNED

The lower end of the index link (20-403) has been changed to improve reliability. The new link utilizes an offset in place of the permanently mounted clevis. The new link may be installed by first removing the trigger restore spring (07-41). Install the offset end of the link as shown in figure 1. Then attach the clevis to the link from the top of the machine.

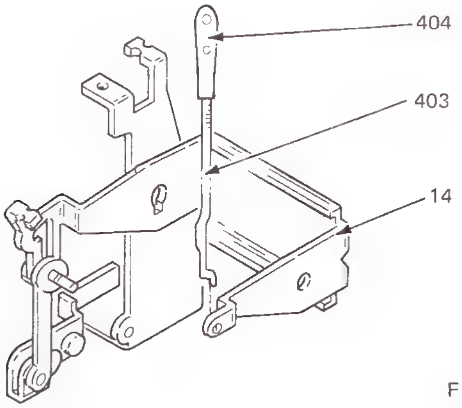


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.
20	403	1336479	Link	1

PARTS INFORMATION:
The previous level link will no longer be available.

Use Applicable Service Code

495 SERVICE INFORMATION

10-6-82

Type(s): 6705

(Revised) 10-20-82

SUBJECT: NEW BOTTOM COVER – PLASTIC

The Selectric III model 6705 is currently being manufactured with a black plastic bottom cover (30-155). The new plastic cover can be used as a replacement for the old metal cover.

When converting from a metal bottom cover to a plastic bottom cover, check for a possible interference between the bottom cover and the center cover. A limited number of center covers (30-156) were manufactured with a rib that may contact the front guide lug on the plastic bottom cover (Fig 1). This interference can be eliminated by filing enough material from the front bottom cover plastic guide lugs to allow proper assembly.

The metal bottom cover will remain available. The plastic bottom cover is not recommended for use with the modified government motor.

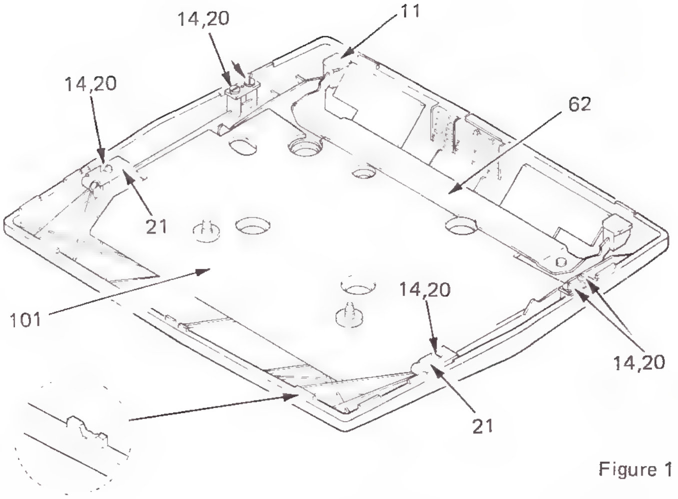


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.
05	11	1359837	Pad, shock mount	1
	14	1449391	Screw	1
	20	1449391	Screw	1
	21	1359833	Upstop, cover latch	1
	62	1359836	Bracket, shock mount	1
	101	1359834	Insul, pad	1
	106	1359839	Bottom cover asm.	1
30	155	1359839	Bottom cover asm.	1

Use Applicable Service Code

435 RELIABILITY

9-10-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Fabric Ribbon Reverse Failures

PURPOSE: Some replacement ribbon plates may have a bind in the area of the stud and the fork in the plate (Figure 1).

SYMPTOM: Ribbon fails to reverse.

SOLUTION: Check for binds in the area shown in Figure 1. Also check new assemblies before installing. If a bind is found on a new assembly return as a new defective part per General Administrative CEM No. 35.

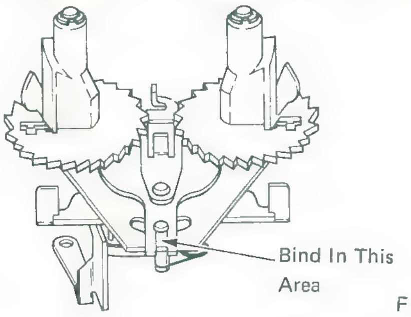


Figure 1

436 RELIABILITY

9-10-80
(Revised) 12-17-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Motor Pawl Assembly – Washer Added

Some machines have nylon washers added to the motor pawl assembly (Figure 1). If experiencing start problems, check for a bind between the washer and the pawls. To eliminate the bind, remove the washers.

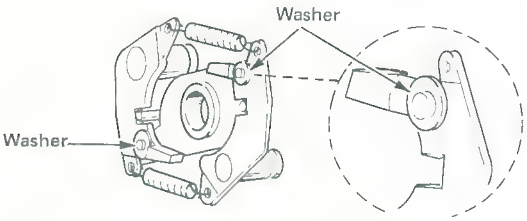


Figure 1

MACHINES AFFECTED: Approx. S/N: Type 6121 (7X1) 0885914 — 0907710; Type 6126 (8X3) 5200758 — 5250192; Type 6126 (8X5) 6603755 — 6730476; Type 6701, 0000001 — 0000095; Type 6702, 1000001 — 1003567; Type 6703, 2000001 — 2004383; Type 6704, 3000001 — 3000761; Type 6705, 4000001 — 4038927.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Service Code 33

437 SERVICE INFORMATION

9-10-80

Type(s): 6701, 6702, 6703, 6704, 6705 (Revised) 3-25-81

SUBJECT: Transformer Replacement – Wire Routing

There is a possibility of interference between the transformer secondary wires and the gear train. To reduce this possibility when replacing the transformer, the secondary wires should be placed on the outside of the Tab/Set Clear link. Figure 1 shows the correct wire path with the machine in the service position. Some early production machines have a metal clamp to secure the wires. Wire ties may be used if necessary.

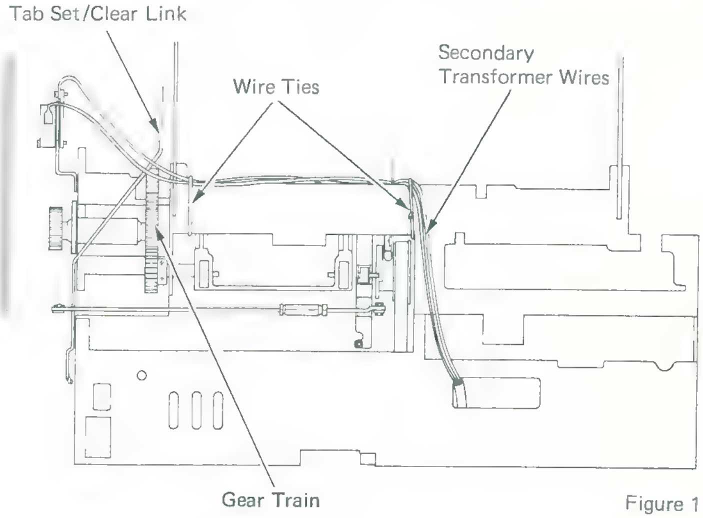


Figure 1

438 SERVICE INFORMATION

9-24-80
(Revised) 10-8-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Upper Idler Gear Bushing – Redesigned

OBSOLETE.

439 SERVICE INFORMATION

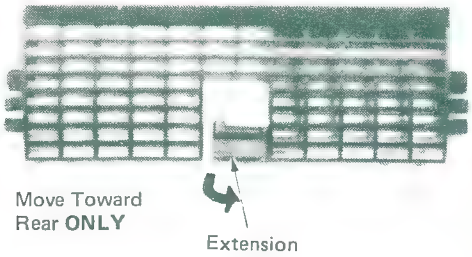
9-24-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Motor Vent Grill Extension – Breakage

Moving the motor vent grill extension too far to the rear or toward the front of the machine may cause it to crack or break. The extension should be moved toward the rear of the machine only far enough to let the linecord in. This extension is required to maintain double insulation.

Note: CSI (F/N 241-5114-2) page 17, item 8, also applies to "Selectric" III typewriters.



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440 SERVICE INFORMATION

9-24-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Cable Guide – Redesigned

The velocity cable guide (02-217) located on the left-hand side of the carrier has been redesigned. The guide is now installed by hooking it over the carrier casting instead of it being held in place by the retainer (02-49) (Figure 1).

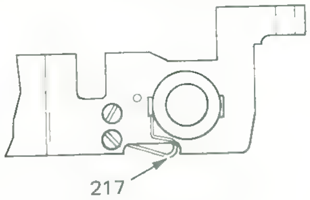

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY	PRICE
02	217	1141637	Cable, Guide	1	.05

441 SERVICE INFORMATION

11-5-80

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Two-Piece Rotate Arm – Redesigned

The two-piece rotate arm has been redesigned to interlock the upper and lower rotate arms together (Figure 1). This will prevent the parts from spreading during a print operation.

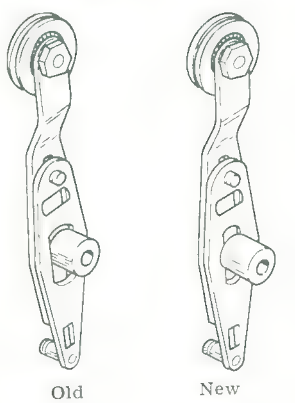

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	514	1147196	Two-Piece Rotate Arm Asm.	1	2.75

Parts Information: The individual parts (upper and lower arm) will no longer be available. The old style two-piece arm will be used until depleted.

442 SERVICE INFORMATION

11-5-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Homing Changes – Rotate Tape Replacement

PURPOSE: Reduce rotate homing adjustment change (drift) after rotate tape replacement.

SYMPTOM: Rotate homing adjustment changes (drifts) within a short time after replacement of a rotate tape. This can occur if the rotate tape is not fully seated, i.e., pulled tight, around the rotate pulley. Normal use causes the tape to seat properly, and the homing adjustment changes. This symptom is sometimes incorrectly referred to as "tape stretch."

SOLUTION: After replacement of the rotate tape and completion of the rotate adjustments, type several lines of repeat underscores. Then check and make the typehead homing adjustment as required.

Note: Machine damage can occur from operating the repeat underscore before making correct rotate adjustments, as well as from operating the print mechanism without the platen and element in place.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

443 SERVICE INFORMATION

11-5-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Tilt Rings – Assembled Incorrectly

There is a possibility of tilt rings (02-333, 335) assembled with incorrect tilt ring bases (02-300). 96 character and 88 character tilt ring bases are not interchangeable. There is a difference in the angle and position of the tilt detent teeth.

If experiencing vertical alignment problems, check the tilt ring base. 96 character tilt ring bases have a small notch to the rear of the zero tilt tooth, (Figure 1). 88 character tilt ring bases have no notch in this location.

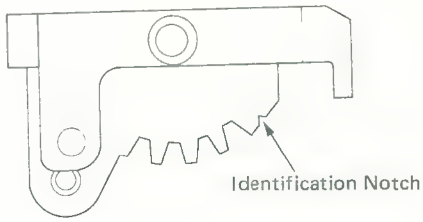

Figure 1

NOTE: Early production 96 character tilt ring bases have a black oxide finish, as do the 88 character bases. Current production 96 character bases are copper colored to aid in identification and elimination of the asm. problem.

If this condition is encountered, replace the tilt ring.

Check field stock of tilt rings, and return any which are incorrectly assembled as NEW DEFECTIVE.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Applicable Service Code

444 SERVICE INFORMATION

11-5-80

Type(s): 6701, 6702, 6703, 6704, 6705 (Revised) 3-25-81

SUBJECT: Custom Keybuttons

The blanket part number for custom keybuttons (21-31) for "Selectric" III is P/N 1302800. Add this information to your type catalog (F/N S241-5687).

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

445 SERVICE INFORMATION

11-5-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Rotate Bellcrank Stud – Installation

The rotate bellcrank stud (23-483) now press/fits into the power frame. Install the stud through bellcrank (23-220), differential bracket (23-485), spacer (23-487) and power frame. Start nut (23-102) on the stud threads and tighten the nut until the stud bottoms against the power frame.

446 SERVICE INFORMATION

12-17-80

Type(s): 6121, 6122, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Replacing Broken Selector Latch Links

The solenoid selection cables (24-353 Mag Card APM F/N 241-5584) used on the Mag Card can be used to replace broken selector latch links (21-316) on the "Selectric" typewriter without removing the motor:

1. Remove the clevis from the selector latch link.
2. Remove the link by breaking it with duck bill pliers or other suitable tool.
3. Install solenoid selection cable (24-353 Mag Card) through hole in selector latch and attach clevis.
4. Attach clevis to selector interposer and adjust.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
21	316	1460846	Cable		1.45
24	353	1460846	Cable (Mag Card)		1.45

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .3 Hr.

Use Applicable Service Code

447 SERVICE INFORMATION

12-17-80

Type(s): 6121, 6126, 670X

SUBJECT: Pinfeed Platen Support B/M (A-Frame Only)

PURPOSE: A pinfeed platen support B/M (49-50) is now available to reduce movement of the pinfeed platen caused by typehead impact. (Max. pin to pin approx. x5, 10" — x3, 9 1/2" — x1, 6")

SYMPTOM: Smeared characters.

SOLUTION: Install the support B/M (49-50) on the right side of the platen (Figure 1) as described below:

1. Remove platen asm. and deflector.
2. Remove LH platen knob, LH platen bushing, pinwheels and core.
3. Assemble support bracket asm. (49-01, 40, 103, 47, 44, and 43) as shown.
4. Install the support bracket asm. on the platen shaft as shown. Do not tighten screws (49-47 and 01).
5. Install the pinwheels, core, LH platen bushing and LH platen knob; tighten only the platen knob screws.
6. Hold the support bracket asm. up in a vertical position while installing the platen.
7. Position the pinwheels and core as far to the left as possible and tighten the pinwheel setscrews.
8. Remove platen asm. and center cover.
9. Install the base (49-45) and guide spring (49-41) on the front of the A-Frame in the slot as shown. Attach with clamp (49-42) and screw (49-46) as shown. Leave screw (49-46) loose at this time. **Note:** End of guide spring with hole should be between the base and A-Frame.
10. Guide the support bracket (49-43) under the extension of the support base (49-45) while installing the platen asm.
11. Slide support base asm. and support bracket asm. as close to the RH pinwheel asm. as possible.
12. Hold the support base (49-45) down against the paper release rod (22-269). Position the spring (49-41) so the support bracket (49-43) will slide under the extension of the support base (49-45) without bending the spring (49-41). Then tighten the screw (49-46).
13. Hold the support bracket (49-43) so that the extensions touch each side of the support base (49-45) while tightening the bushing screws (49-1).
14. Hold the support bracket (49-43) to the rear (both extensions touching the support base) while tightening the screw (49-47).
15. Remove the platen.
16. Install center cover and deflector.
17. Guide the support bracket (49-43) between the deflector and the center cover while installing the platen.

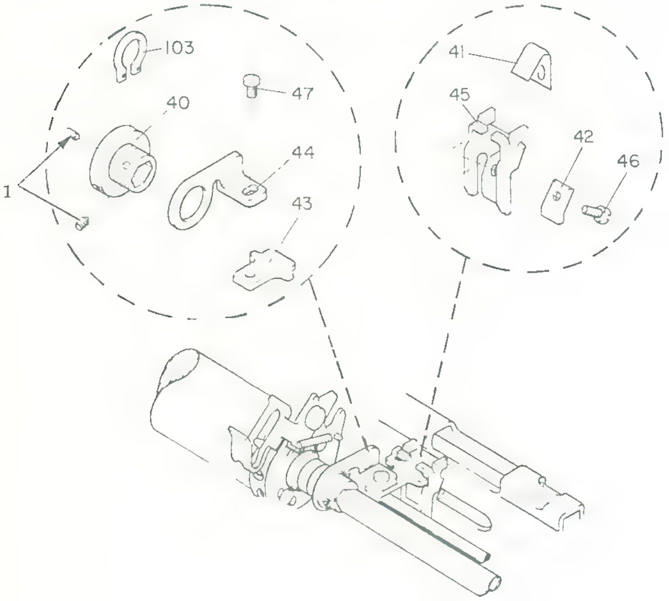

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
49	1	1175101	Screw	2	PP01
	40	1256673	Bushing	1	2.00
	41	1256674	Guide Spring	1	.75
	42	1256675	Clamp	1	.65
	43	1256676	Support Bracket	1	1.10
	44	1256677	Support	1	1.05
	45	1256678	Support Base	1	2.65
	46	0038351	Screw	1	.08
	47	1117759	Screw, Support	1	PP14
	50	1256679	Support B/M	1	—

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: 1 Hr.

Use Applicable Service Code

448 SERVICE INFORMATION

12-17-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Stop — Selector Cam Lever Mounting Bracket — "A" Frame With Double Index

A positive stop has been released to prevent accidental bending of the selector cam lever mounting bracket (20-327) on machines with the double index mechanism. A bent mounting bracket can result in line space failures. On double index machines, the line space lever is in the center of the cover slot in its extreme rear position. With the stop installed the lever cannot be forced to the rear of the slot. Install the stop as illustrated in Figure 1.

This part is for field use only. Install as required.

ADJUSTMENTS: Form stop so that it just contacts the index lever in the rear detent position.

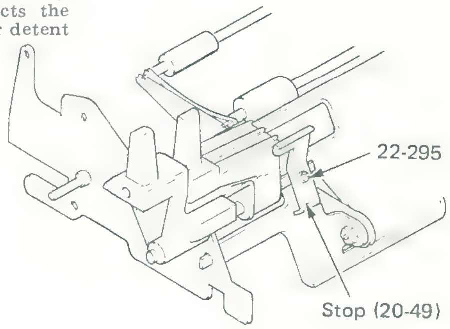

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
20	49	1256686	Stop	1	5.00

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Applicable Service Code

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449 SERVICE INFORMATION

1-28-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Bellringer Bellcrank – Redesigned

The bellringer bellcrank (09-106, 10-8) has been redesigned as shown in Figure 1. The paddle portion has been lengthened on both 7XX, 8XX and 670X parts and an extension added to prevent the bellcrank from slipping over the top of the linelock bail on 8XX and 670X machines (09-80). The tip of the bellcrank has also been modified to eliminate interference with the inhibitor actuation bellcrank (26-126) while typing through the right-hand margin on correcting machines, which can result in unwanted correct tape feed operations.

The redesigned parts are compatible with all levels of machines.

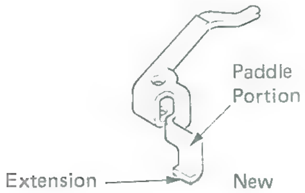

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
09	106	1256666	Bellringer Bellcrank	1	.25
10	8	1256662	Bellringer Bellcrank	1	.35

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Old level parts will no longer be available.

Use Applicable Service Code

450 SERVICE INFORMATION

1-28-81

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: "Selectric" III Sound Reduction – B/M

The six insulation strips on the left and right sides of the bottom cover have been removed. These parts were found to be ineffective in the reduction of sound. The parts were included in early build "Selectric" IIIs, but will not be included in future B/Ms or machines.

NOTE: Until installation instructions are released for the "Selectric" III sound reduction B/M refer to the APM, Mech 30 right frame.

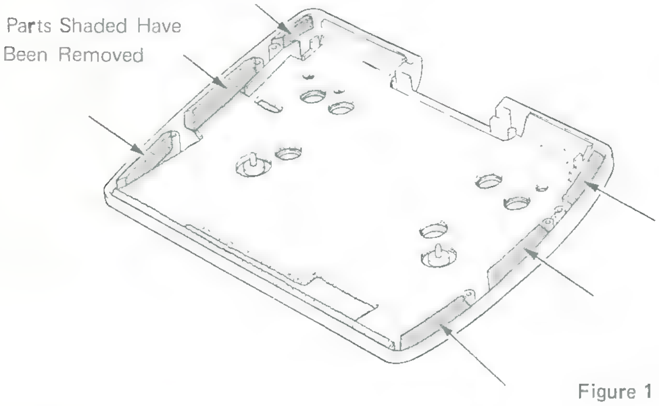

Figure 1

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

451 SERVICE INFORMATION

3-25-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Carrier Return Unlatching Link – Interference

PURPOSE: Inform the field of the possibility of the carrier return unlatching link binding on shift brake (16-208), print shaft mounting bracket screw (02-37), or transport pulley and bracket assembly (18-130).

SYMPTOM: Carrier return fails to latch reliably (partial carrier return).

SOLUTION: Form the unlatching link with duckbill pliers or other suitable tool to remove the interference.

ADJUSTMENTS: Remain the same.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

452 SERVICE INFORMATION

3-25-81

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Dual Impression Cam/Mounting Bracket – Interference

There is a possibility of interference between the DI cam (21-426) and the DI cable mounting bracket (21-425) on some "Selectric" II and III machines. This interference is the result of an accumulation of tolerances in the power frame. A washer (P/N 1175868) (23-476) has been added on an as needed basis to correct the interference problem. If this problem is seen in the field, washer (P/N 1175868) (23-476) can be added as shown in Figure 1.

ADJUSTMENTS: Remain the same.

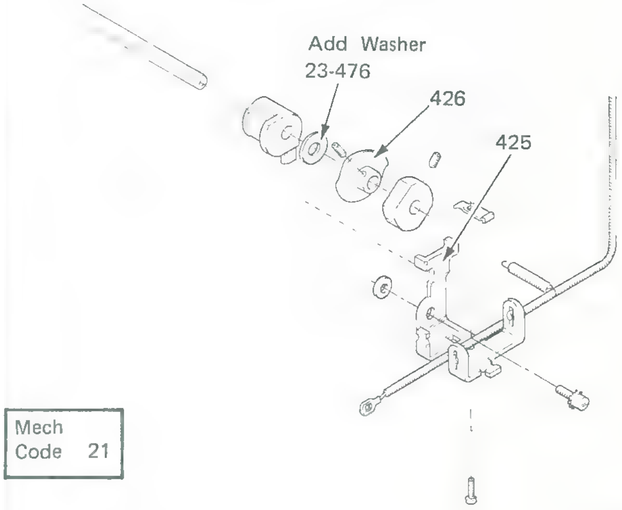

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	476	1175868	Washer	1	.02

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

447 SERVICE INFORMATION

12-17-80

Type(s): 6121, 6126, 670X

SUBJECT: Pinfeed Platen Support B/M (A-Frame Only)

PURPOSE: A pinfeed platen support B/M (49-50) is now available to reduce movement of the pinfeed platen caused by typehead impact. (Max. pin to pin approx. x5, 10" — x3, 9 1/2" — x1, 6")

SYMPTOM: Smeared characters.

SOLUTION: Install the support B/M (49-50) on the right side of the platen (Figure 1) as described below:

1. Remove platen asm. and deflector.
2. Remove LH platen knob, LH platen bushing, pinwheels and core.
3. Assemble support bracket asm. (49-01, 40, 103, 47, 44, and 43) as shown.
4. Install the support bracket asm. on the platen shaft as shown. Do not tighten screws (49-47 and 01).
5. Install the pinwheels, core, LH platen bushing and LH platen knob; tighten only the platen knob screws.
6. Hold the support bracket asm. up in a vertical position while installing the platen.
7. Position the pinwheels and core as far to the left as possible and tighten the pinwheel setscrews.
8. Remove platen asm. and center cover.
9. Install the base (49-45) and guide spring (49-41) on the front of the A-Frame in the slot as shown. Attach with clamp (49-42) and screw (49-46) as shown. Leave screw (49-46) loose at this time. **Note:** End of guide spring with hole should be between the base and A-Frame.
10. Guide the support bracket (49-43) under the extension of the support base (49-45) while installing the platen asm.
11. Slide support base asm. and support bracket asm. as close to the RH pinwheel asm. as possible.
12. Hold the support base (49-45) down against the paper release rod (22-269). Position the spring (49-41) so the support bracket (49-43) will slide under the extension of the support base (49-45) without bending the spring (49-41). Then tighten the screw (49-46).
13. Hold the support bracket (49-43) so that the extensions touch each side of the support base (49-45) while tightening the bushing screws (49-1).
14. Hold the support bracket (49-43) to the rear (both extensions touching the support base) while tightening the screw (49-47).
15. Remove the platen.
16. Install center cover and deflector.
17. Guide the support bracket (49-43) between the deflector and the center cover while installing the platen.

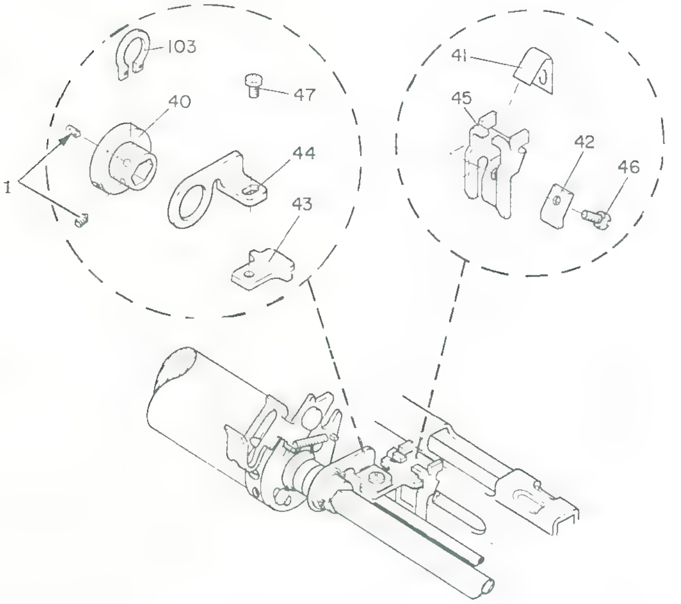

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
49	1	1175101	Screw	2	PP01
	40	1256673	Bushing	1	2.00
	41	1256674	Guide Spring	1	.75
	42	1256675	Clamp	1	.65
	43	1256676	Support Bracket	1	1.10
	44	1256677	Support	1	1.05
	45	1256678	Support Base	1	2.65
	46	0038351	Screw	1	.08
	47	1117759	Screw, Support	1	PP14
	50	1256679	Support B/M	1	—

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: 1 Hr.

Use Applicable Service Code

448 SERVICE INFORMATION

12-17-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Stop — Selector Cam Lever Mounting Bracket — "A" Frame With Double Index

A positive stop has been released to prevent accidental bending of the selector cam lever mounting bracket (20-327) on machines with the double index mechanism. A bent mounting bracket can result in line space failures. On double index machines, the line space lever is in the center of the cover slot in its extreme rear position. With the stop installed the lever cannot be forced to the rear of the slot. Install the stop as illustrated in Figure 1.

This part is for field use only. Install as required.

ADJUSTMENTS: Form stop so that it just contacts the index lever in the rear detent position.

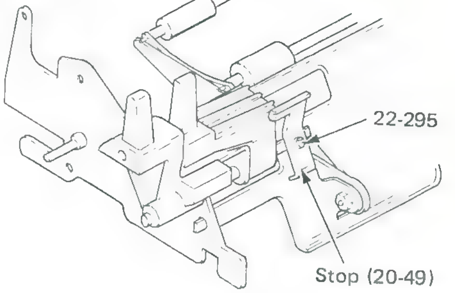

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
20	49	1256686	Stop	1	5.00

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Applicable Service Code

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449

SERVICE INFORMATION

1-28-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Bellringer Bellcrank – Redesigned

The bellringer bellcrank (09-106, 10-8) has been redesigned as shown in Figure 1. The paddle portion has been lengthened on both 7XX, 8XX and 670X parts and an extension added to prevent the bellcrank from slipping over the top of the linelock bail on 8XX and 670X machines (09-80). The tip of the bellcrank has also been modified to eliminate interference with the inhibitor actuation bellcrank (26-126) while typing through the right-hand margin on correcting machines, which can result in unwanted correct tape feed operations.

The redesigned parts are compatible with all levels of machines.

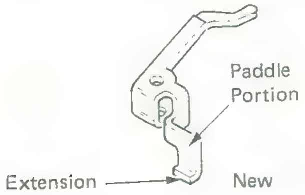

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
09	106	1256666	Bellringer Bellcrank	1	.25
10	8	1256662	Bellringer Bellcrank	1	.35

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Old level parts will no longer be available.

Use Applicable Service Code

450

SERVICE INFORMATION

1-28-81

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: "Selectric" III Sound Reduction – B/M

The six insulation strips on the left and right sides of the bottom cover have been removed. These parts were found to be ineffective in the reduction of sound. The parts were included in early build "Selectric" IIIs, but will not be included in future B/Ms or machines.

NOTE: Until installation instructions are released for the "Selectric" III sound reduction B/M refer to the APM, Mech 30 right frame.

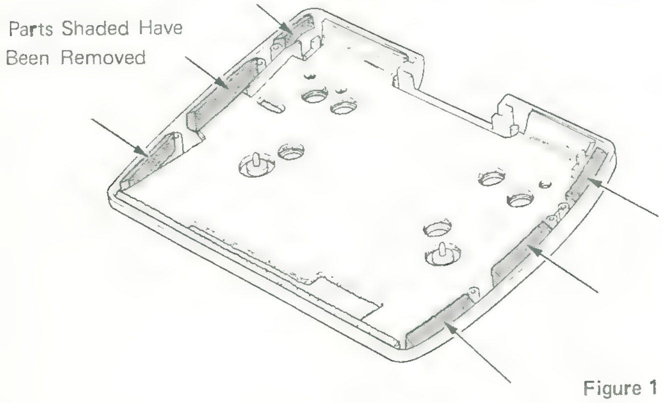

Figure 1

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

451

SERVICE INFORMATION

3-25-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Carrier Return Unlatching Link – Interference

PURPOSE: Inform the field of the possibility of the carrier return unlatching link binding on shift brake (16-208), print shaft mounting bracket screw (02-37), or transport pulley and bracket assembly (18-130).

SYMPTOM: Carrier return fails to latch reliably (partial carrier return).

SOLUTION: Form the unlatching link with duckbill pliers or other suitable tool to remove the interference.

ADJUSTMENTS: Remain the same.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

452

SERVICE INFORMATION

3-25-81

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Dual Impression Cam/Mounting Bracket – Interference

There is a possibility of interference between the DI cam (21-426) and the DI cable mounting bracket (21-425) on some "Selectric" II and III machines. This interference is the result of an accumulation of tolerances in the power frame. A washer (P/N 1175868) (23-476) has been added on an as needed basis to correct the interference problem. If this problem is seen in the field, washer (P/N 1175868) (23-476) can be added as shown in Figure 1.

ADJUSTMENTS: Remain the same.

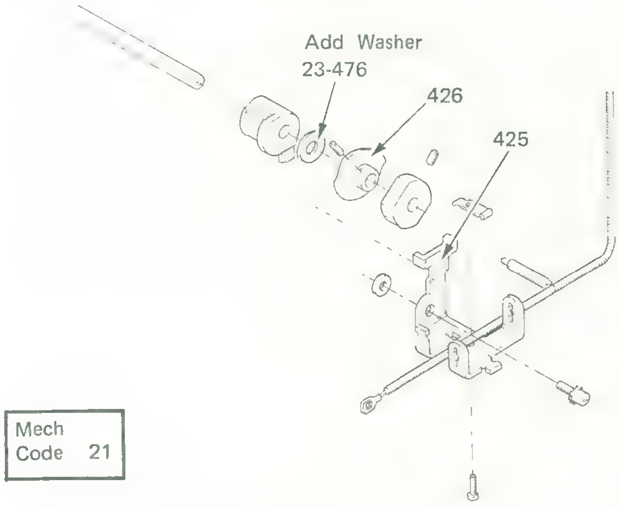

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	476	1175868	Washer	1	.02

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

453

SERVICE INFORMATION

4-8-81

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: Platen Detent – Interference

A limited number of early production "Selectric" IIIs were manufactured with a right front paper feed eccentric adjusting screw (22-250) which is longer than the present design. The long screw may interfere with the platen detent arm (20-21), causing index failures. If this condition is found, replace with present production screw (22-250).

MACHINES AFFECTED: Below approx. S/N: Type 6701 — 0000095; Type 6702 — 1003567; Type 6703 — 2004383; Type 6704 — 3000761; Type 6705 — 4038927.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

454 SAFETY

4-8-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Motor And Drive Double Insulation System

PURPOSE: Inform the field of the safety exposure to the Customer Engineer in the Motor And Drive Double Insulation System.

SAFETY INFORMATION: The Double Insulation System is designed to protect the customer from possible electrical shock. This is accomplished by isolating all hazardous voltage by at least two separate and unrelated levels of insulation (Figure 1). The Double Insulation System does not fully protect the Customer Engineer. The possibility of an electrical shock is increased because there is only one level of insulation between the Customer Engineer and the live parts of the motor when the covers are removed and the CE is servicing the machine in this area. The motor shell is not double insulated, but has only basic insulation as indicated in (Figure 1) 1st level of insulation. The second level of insulation consists of the motor mounts (11-22).

CEs must be aware that on 2 wire double insulated machines, an insulation fault in the motor will result in a shock if the motor shell is touched along with a ground source.

SAFETY PRECAUTION: Turn the motor switch off prior to touching the motor shaft or shell. Do not hold motor in your hand to test. (To check for a faulted motor, make a resistance check between the motor shell and the motor leads, using your Volt-Ohm Meter. A reading of infinity indicates good insulation.)

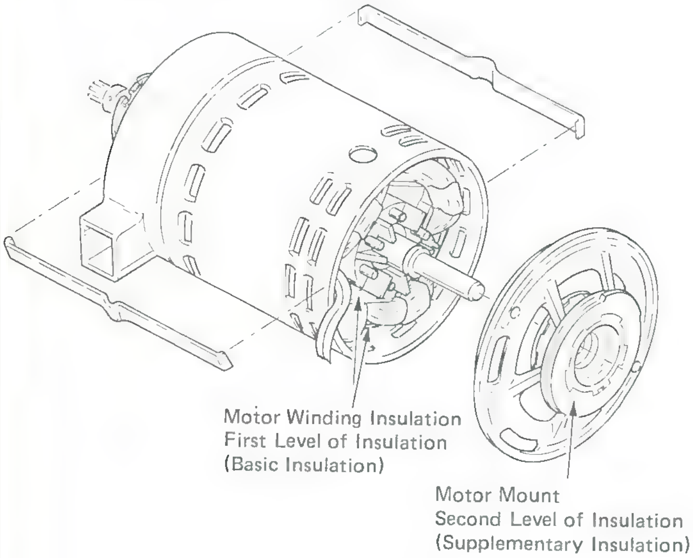
Motor Winding Insulation
First Level of Insulation
(Basic Insulation)
Motor Mount
Second Level of Insulation
(Supplementary Insulation)

Figure 1

NOTE: On 3 wire machines, if the ground strap is not present between the motor and frame (or is not properly installed), the risk of a shock is somewhat higher than with Double Insulated machines because the machine frame is grounded.

TIP TIMELY INFORMATION PROGRAM

4-8-81

Type(s): 6121, 6126

SUBJECT: Platen Knobs Loose

The holding power of the platen knob screws on Level I platens can be improved by filing a small flat on the platen shaft for one or both of the screws (Figure 1).

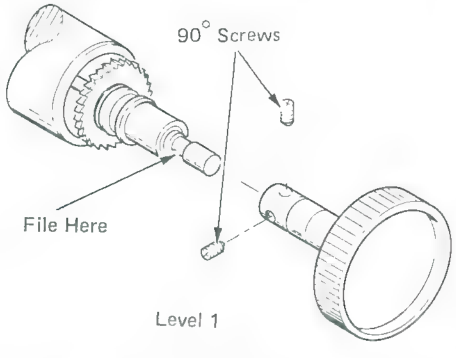

Figure 1

The use of Type E Sealant (P/N 605960) as indicated in the "Selectric" CSI (See Paper Feed — Paper Bail Arm And Platen Knob Screws — Loose) may also be helpful.

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CEM Customer Engineers Memorandum

"Selectric" Typewriter

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454 SAFETY 4-8-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Motor And Drive Double Insulation System

PURPOSE: Inform the field of the safety exposure to the Customer Engineer in the Motor And Drive Double Insulation System.

SAFETY INFORMATION: The Double Insulation System is designed to protect the customer from possible electrical shock. This is accomplished by isolating all hazardous voltage by at least two separate and unrelated levels of insulation (Figure 1). The Double Insulation System does not fully protect the Customer Engineer. The possibility of an electrical shock is increased because there is only one level of insulation between the Customer Engineer and the live parts of the motor when the covers are removed and the CE is servicing the machine in this area. The motor shell is not double insulated, but has only basic insulation as indicated in (Figure 1) 1st level of insulation. The second level of insulation consists of the motor mounts (11-22).

CEs must be aware that on 2 wire double insulated machines, an insulation fault in the motor will result in a shock if the motor shell is touched along with a ground source.

SAFETY PRECAUTION: Turn the motor switch off prior to touching the motor shaft or shell. Do not hold motor in your hand to test. (To check for a faulted motor, make a resistance check between the motor shell and the motor leads, using your Volt-Ohm Meter. A reading of infinity indicates good insulation.)

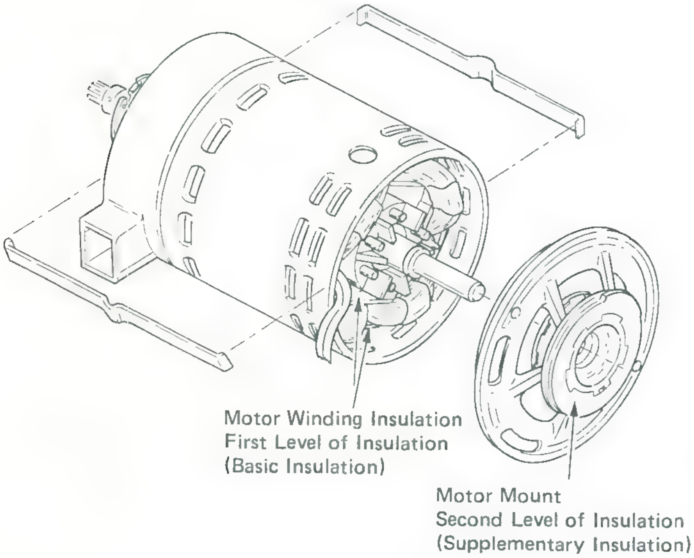

Motor Winding Insulation
First Level of Insulation
(Basic Insulation)
Motor Mount
Second Level of Insulation
(Supplementary Insulation)

Figure 1

NOTE: On 3 wire machines, if the ground strap is not present between the motor and frame (or is not properly installed), the risk of a shock is somewhat higher than with Double Insulated machines because the machine frame is grounded.

455 SAFETY 5-20-81

Type(s): 6704, 6705

SUBJECT: Possible CE Safety Exposure – Line Cord, Motor Pulley Contact

PURPOSE: **PRECAUTION:** The motor shell could become live (i.e., line voltage present on the motor shell) on dual pitch "Selectric" IIIs manufactured prior to the S/Ns listed below. The length of the line cord from the white strain relief to the transformer may be excessive. The added length can allow the cord to contact the motor pulley/shaft. This may wear the line cord insulation, resulting in the shell becoming live.

NOTE: This condition is an exposure to the CE only, the customer is protected by the second level of insulation (See "Selectric" CEM No. 454).

SAFETY CORRECTIVE ACTION: Check for this condition on the NEXT SERVICE CALL, **BEFORE** performing any other service, as follows:

1. Unplug the line cord and remove the covers.
2. Check for damage to the line cord insulation in the area indicated and replace it if damage is evident.
3. Install wire tie (11-606) as shown in Figure 1.
4. Reapply power and check for proper machine operation.

NOTE: All machines within the specified S/N range must be checked for this condition on the next service call. The wire tie must be installed on **ALL** machines. (The wire tie is plant installed on machines above the S/N listed.)

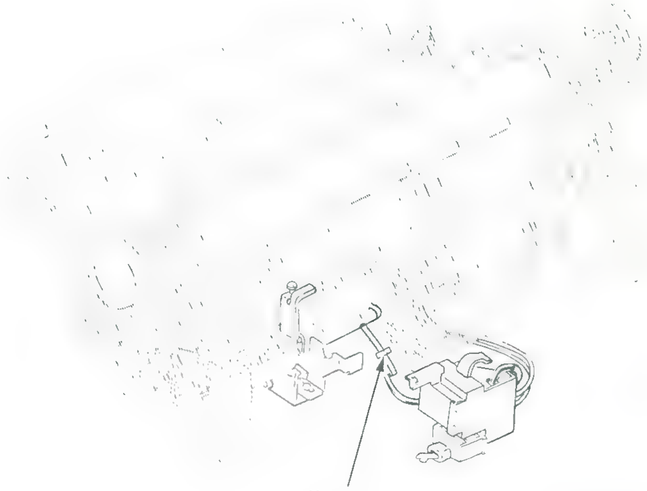
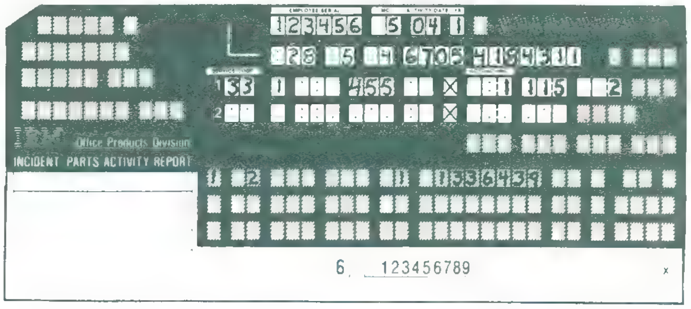


Figure 1

REPORTING: **All** Branch Offices are to record this activity on an **I/PAR**, entering CEM No. 455 in the part ref./minor block. Record part usage of the line cord, if replaced. Do not record usage of the wire tie (Figure 2).


Office Products Division
INCIDENT PARTS ACTIVITY REPORT

123456 5 04 1

28 5 04 6705 4184311

1 33 1 455 X 1 115 2

2 X

1 2 1 1336439

6. 123456789 x

Figure 2

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
11	52	1336439	Line Cord 8 Ft. SE III DP	1	—
	52	1336440	Line Cord 13 Ft. SE III DP	1	—
	606	1245622	Wire Tie	1	—

MACHINES AFFECTED: Below approx. S/N: Type 6704 — 3006980, Type 6705 — 4184311.

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456 SERVICE INFORMATION

7-15-81

Type(s): 6704, 6705

SUBJECT: PN/PL Correction

The margin pointer (10-100) should be P/N 1254997. Mark this change in your PN/PL.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
10	100	1254997	Margin Pointer — Dual Pitch	1	—

457 SERVICE INFORMATION

7-15-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Cycle Clutch Spring — Redesigned

The extensions on the cycle clutch spring (23-404) have been changed to make them both the same length. The cycle clutch spring can now be installed with either extension to the left.

Parts Information: Existing field stocks will be used until depleted.

458 SERVICE INFORMATION

7-15-81

Type(s): 6126

SUBJECT: Rotary Backspace Bellcrank Stop — Level 1 Field Fix

The backspace bellcrank downstop (24-116) can be installed on a machine with all steel transport when the bellcrank upstop lug on the Level 1 backplate is weak or broken.

PROCEDURE:

1. Remove two L-1 backplate mounting screws (24-14 and 24-113).
2. Using a No. 22 bit, drill the threads out of the holes in the power frame from which the screws were removed.
3. Install the bellcrank downstop as shown in Figure 1 with two screws (24-114 and 24-117) and one washer (24-119). Use Level 2 adjustments to check backspace motion.

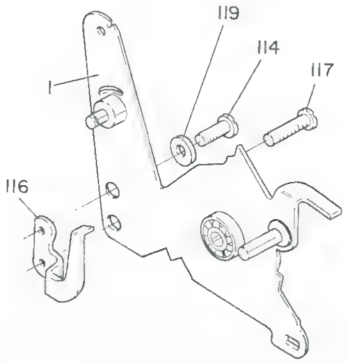


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
24	114	322065	Screw, Downstop	1	—
	116	1205943	Stop, Down	1	—
	117	1164581	Screw	1	—
	119	1090622	Washer	1	—

459 SERVICE INFORMATION

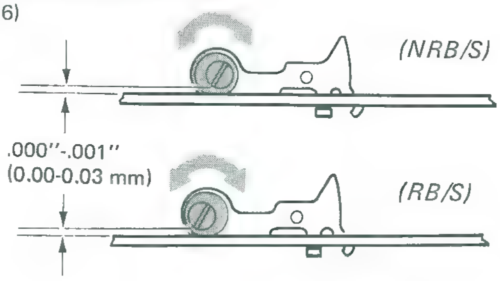
7-15-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Pawl Mounting Stud

Frame 119 of APM 241-5939-3 is incorrect. On NRB/S machines, the high lobe of the cam should be to the left and on RB/S machines, the high lobe of the cam should be to the right. This correction is shown in Figure 1. Mark this change in your APM.

Pawl Mounting Stud (Final)
(06-26)



(Bottom View — Level 1)

Figure 1

Use Applicable Service Code.

460 SERVICE INFORMATION

7-15-81

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Escapement Pawl Mounting Stud And Spacer (RB/S) — Redesigned

The Level 2 escapement pawl mounting stud (07-5) and spacer (07-3) have been redesigned to eliminate the need for the former level spacer (P/N 1204370) and shim (P/N 1290994).

When replacement of either the stud or the spacer is required on machine below the specified S/N range(s), replace both parts with the new level parts and discard the shim.

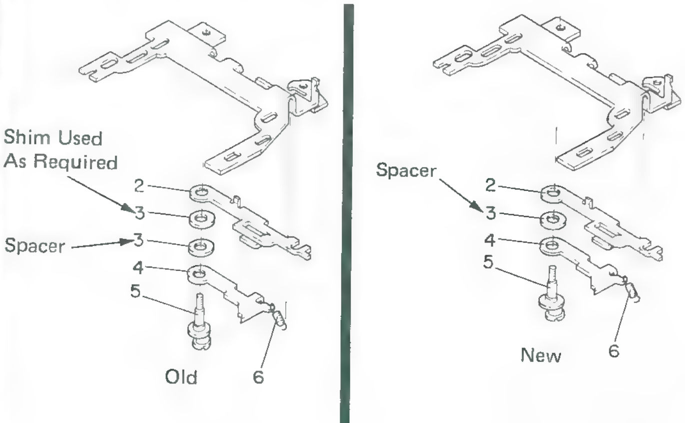


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
07	3	1256873	Spacer	1	—
	5	1256619	Stud, Pawl, L-2	1	—

MACHINES AFFECTED: S/N: (8X3) 5289139, (8X5) — 6868874, 6701 — 0001239, 6702 — 1003697, 6703 — 2005463, 6704 — 3003246, 6705 — 4110573.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

461 RELIABILITY

7-15-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Torque Limiter Hub — Defective

PURPOSE: Some machines were manufactured with an excessive taper on the shoulder portion of the torque limiter hub (25-3) (Figure 1).

SYMPTOM: The taper will result in the torque limiter spring (25-9), torque limiter arbor (25-11), CR spring (25-13) and CR pinion being driven to the right into the "C"-clip during machine operation. A binding condition or premature wear of these parts can occur.

SOLUTION: When experiencing this symptom, replace the torque limiter (25-3). Examine the other affected parts and replace as necessary.

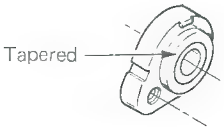


Figure 1

MACHINES AFFECTED: Approx S/N: Type 6121 (Model 7X1) 0918226-0955085; Type 6126 (Model 8X3) 5261152-5295026; Type 6126 (8X5) 6777398-6882781; Type 6126 (Model 895) 4960127-4993029; Type 6701, 0000159-0004723; Type 6702, 1003579-1004433; Type 6703, 2004488-2007464; Type 6704, 3000999-3005259; Type 6705, 4045275-4158376; Type 6705, 5009200-5066000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Service Code 33

This CEM Expires: 4-1-82

[illegible]

435 RELIABILITY

9-10-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Fabric Ribbon Reverse Failures

PURPOSE: Some replacement ribbon plates may have a bind in the area of the stud and the fork in the plate (Figure 1).

SYMPTOM: Ribbon fails to reverse.

SOLUTION: Check for binds in the area shown in Figure 1. Also check new assemblies before installing. If a bind is found on a new assembly return as a new defective part per General Administrative CEM No. 35.

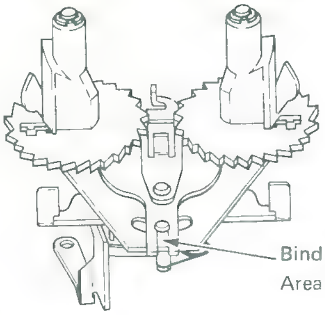


Figure 1

436 RELIABILITY

9-10-80
(Revised) 12-17-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Motor Pawl Assembly – Washer Added

Some machines have nylon washers added to the motor pawl assembly (Figure 1). If experiencing start problems, check for a bind between the washer and the pawls. To eliminate the bind, remove the washers.

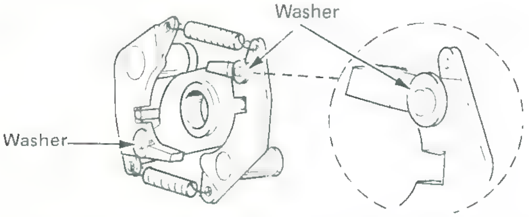


Figure 1

MACHINES AFFECTED: Approx. S/N: Type 6121 (7X1) 0885914 — 0907710; Type 6126 (8X3) 5200758 — 5250192; Type 6126 (8X5) 6603755 — 6730476; Type 6701, 0000001 — 0000095; Type 6702, 1000001 — 1003567; Type 6703, 2000001 — 2004383; Type 6704, 3000001 — 3000761; Type 6705, 4000001 — 4038927.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Service Code 33

437 SERVICE INFORMATION

9-10-80

Type(s): 6701, 6702, 6703, 6704, 6705 (Revised) 3-25-81

SUBJECT: Transformer Replacement – Wire Routing

There is a possibility of interference between the transformer secondary wires and the gear train. To reduce this possibility when replacing the transformer, the secondary wires should be placed on the outside of the Tab/Set Clear link. Figure 1 shows the correct wire path with the machine in the service position. Some early production machines have a metal clamp to secure the wires. Wire ties may be used if necessary.

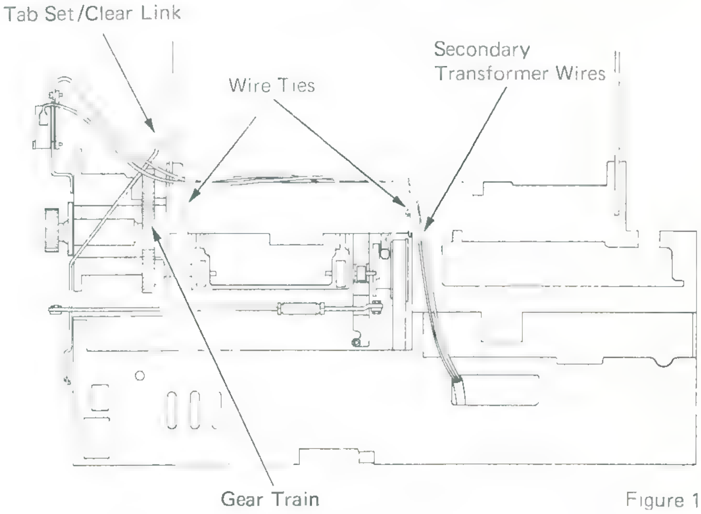


Figure 1

438 SERVICE INFORMATION

9-24-80
(Revised) 10-8-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Upper Idler Gear Bushing – Redesigned

OBSOLETE.

439 SERVICE INFORMATION

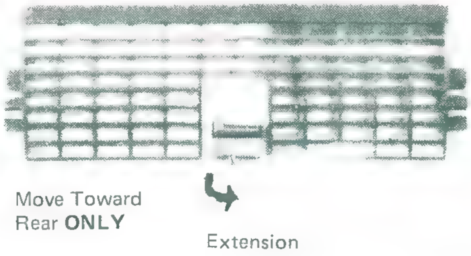
9-24-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Motor Vent Grill Extension – Breakage

Moving the motor vent grill extension too far to the rear or toward the front of the machine may cause it to crack or break. The extension should be moved toward the rear of the machine only far enough to let the linecord in. This extension is required to maintain double insulation.

Note: CSI (F/N 241-5114-2) page 17, item 8, also applies to "Selectric" III typewriters.



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440 SERVICE INFORMATION

9-24-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Cable Guide – Redesigned

The velocity cable guide (02-217) located on the left-hand side of the carrier has been redesigned. The guide is now installed by hooking it over the carrier casting instead of it being held in place by the retainer (02-49) (Figure 1).

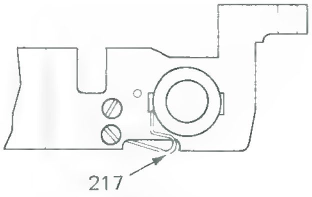

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY	PRICE
02	217	1141637	Cable, Guide	1	.05

441 SERVICE INFORMATION

11-5-80

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Two-Piece Rotate Arm – Redesigned

The two-piece rotate arm has been redesigned to interlock the upper and lower rotate arms together (Figure 1). This will prevent the parts from spreading during a print operation.

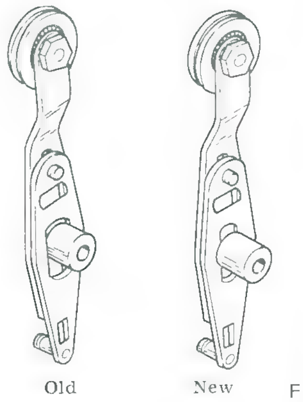

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	514	1147196	Two-Piece Rotate Arm Asm.	1	2.75

Parts Information: The individual parts (upper and lower arm) will no longer be available. The old style two-piece arm will be used until depleted.

442 SERVICE INFORMATION

11-5-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Homing Changes – Rotate Tape Replacement

PURPOSE: Reduce rotate homing adjustment change (drift) after rotate tape replacement.

SYMPTOM: Rotate homing adjustment changes (drifts) within a short time after replacement of a rotate tape. This can occur if the rotate tape is not fully seated, i.e., pulled tight, around the rotate pulley. Normal use causes the tape to seat properly, and the homing adjustment changes. This symptom is sometimes incorrectly referred to as "tape stretch."

SOLUTION: After replacement of the rotate tape and completion of the rotate adjustments, type several lines of repeat underscores. Then check and make the typehead homing adjustment as required.

Note: Machine damage can occur from operating the repeat underscore before making correct rotate adjustments, as well as from operating the print mechanism without the platen and element in place.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

443 SERVICE INFORMATION

11-5-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Tilt Rings – Assembled Incorrectly

There is a possibility of tilt rings (02-333, 335) assembled with incorrect tilt ring bases (02-300). 96 character and 88 character tilt ring bases are not interchangeable. There is a difference in the angle and position of the tilt detent teeth.

If experiencing vertical alignment problems, check the tilt ring base. 96 character tilt ring bases have a small notch to the rear of the zero tilt tooth, (Figure 1). 88 character tilt ring bases have no notch in this location.

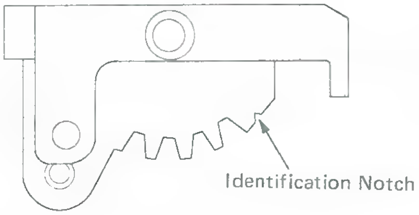

Figure 1

NOTE: Early production 96 character tilt ring bases have a black oxide finish, as do the 88 character bases. Current production 96 character bases are copper colored to aid in identification and elimination of the asm. problem.

If this condition is encountered, replace the tilt ring.

Check field stock of tilt rings, and return any which are incorrectly assembled as NEW DEFECTIVE.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Applicable Service Code

444 SERVICE INFORMATION

11-5-80

Type(s): 6701, 6702, 6703, 6704, 6705

(Revised) 8-26-81

SUBJECT: Custom Keybuttons

The blanket part number for all custom keybuttons (21-31) **except** position D-12 is P/N 1302800. Position D-12 is P/N 1254207. Add this information to your type catalog (S241-5687).

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

445 SERVICE INFORMATION

11-5-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Rotate Bellcrank Stud – Installation

The rotate bellcrank stud (23-483) now press/fits into the power frame. Install the stud through bellcrank (23-220), differential bracket (23-485), spacer (23-487) and power frame. Start nut (23-102) on the stud threads and tighten the nut until the stud bottoms against the power frame.

446 SERVICE INFORMATION

12-17-80

Type(s): 6121, 6122, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Replacing Broken Selector Latch Links

The solenoid selection cables (24-353 Mag Card APM F/N 241-5584) used on the Mag Card can be used to replace broken selector latch links (21-316) on the "Selectric" typewriter without removing the motor:

1. Remove the clevis from the selector latch link.
2. Remove the link by breaking it with duck bill pliers or other suitable tool.
3. Install solenoid selection cable (24-353 Mag Card) through hole in selector latch and attach clevis.
4. Attach clevis to selector interposer and adjust.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
21	316	1460846	Cable		1.45
24	353	1460846	Cable (Mag Card)		1.45

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .3 Hr.

Use Applicable Service Code

454 SAFETY 4-8-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Motor And Drive Double Insulation System

PURPOSE: Inform the field of the safety exposure to the Customer Engineer in the Motor And Drive Double Insulation System.

SAFETY INFORMATION: The Double Insulation System is designed to protect the customer from possible electrical shock. This is accomplished by isolating all hazardous voltage by at least two separate and unrelated levels of insulation (Figure 1). The Double Insulation System does not fully protect the Customer Engineer. The possibility of an electrical shock is increased because there is only one level of insulation between the Customer Engineer and the live parts of the motor when the covers are removed and the CE is servicing the machine in this area. The motor shell is not double insulated, but has only basic insulation as indicated in (Figure 1) 1st level of insulation. The second level of insulation consists of the motor mounts (11-22).

CEs must be aware that on 2 wire double insulated machines, an insulation fault in the motor will result in a shock if the motor shell is touched along with a ground source.

SAFETY PRECAUTION: Turn the motor switch off prior to touching the motor shaft or shell. Do not hold motor in your hand to test. (To check for a faulted motor, make a resistance check between the motor shell and the motor leads, using your Volt-Ohm Meter. A reading of infinity indicates good insulation.)

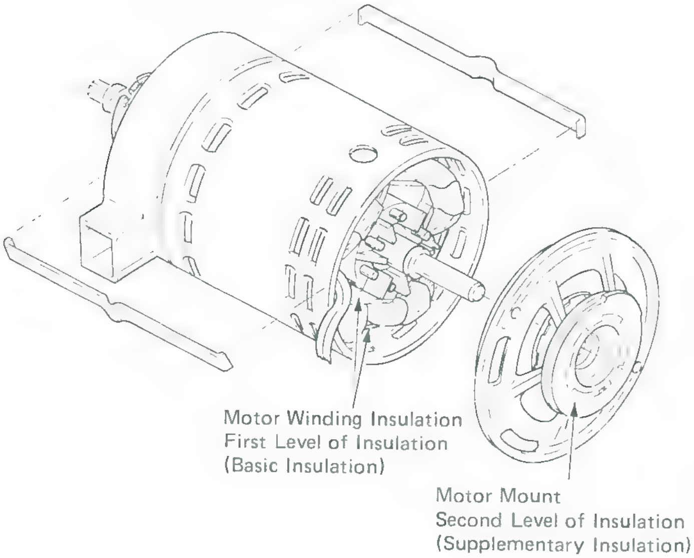
Motor Winding Insulation
First Level of Insulation
(Basic Insulation)
Motor Mount
Second Level of Insulation
(Supplementary Insulation)

Figure 1

NOTE: On 3 wire machines, if the ground strap is not present between the motor and frame (or is not properly installed), the risk of a shock is somewhat higher than with Double Insulated machines because the machine frame is grounded.

455 SAFETY 5-20-81

Type(s): 6704, 6705

SUBJECT: Possible CE Safety Exposure – Line Cord, Motor Pulley Contact

PURPOSE: **PRECAUTION:** The motor shell could become live (i.e., line voltage present on the motor shell) on dual pitch "Selectric" IIIs manufactured prior to the S/Ns listed below. The length of the line cord from the white strain relief to the transformer may be excessive. The added length can allow the cord to contact the motor pulley/shaft. This may wear the line cord insulation, resulting in the shell becoming live.

NOTE: This condition is an exposure to the CE only, the customer is protected by the second level of insulation (See "Selectric" CEM No. 454).

SAFETY CORRECTIVE ACTION: Check for this condition on the NEXT SERVICE CALL, **BEFORE** performing any other service, as follows:

1. Unplug the line cord and remove the covers.
2. Check for damage to the line cord insulation in the area indicated and replace it if damage is evident.
3. Install wire tie (11-606) as shown in Figure 1.
4. Reapply power and check for proper machine operation.

NOTE: All machines within the specified S/N range must be checked for this condition on the next service call. The wire tie must be installed on **ALL** machines. (The wire tie is plant installed on machines above the S/N listed.)

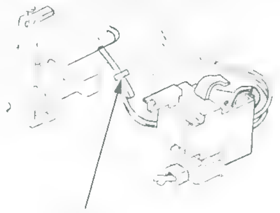

Figure 1

REPORTING: **All** Branch Offices are to record this activity on an **I/PAR**, entering CEM No. 455 in the part ref./minor block. Record part usage of the line cord, if replaced. Do not record usage of the wire tie (Figure 2).

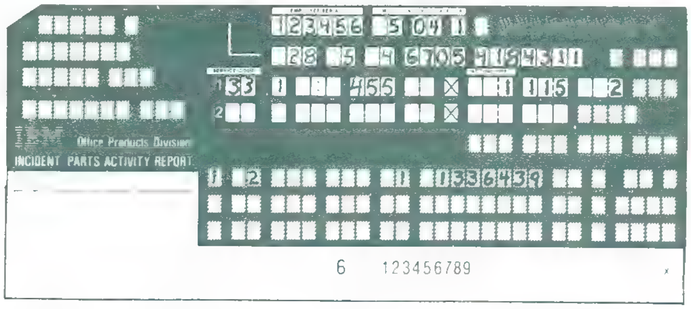
123456 5 04 1
28 5 4 6705 4184311
1 33 1 455 ☒ 1 115 2
2 ☒
IBM Office Products Division
INCIDENT PARTS ACTIVITY REPORT
1 2 1 0336439
6 123456789

Figure 2

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
11	52	1336439	Line Cord 8 Ft. SE III DP	1	—
	52	1336440	Line Cord 13 Ft. SE III DP	1	—
	606	1245622	Wire Tie	1	—

MACHINES AFFECTED: Below approx. S/N: Type 6704 — 3006980, Type 6705 — 4184311.

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456 RELIABILITY

8-26-81

Type(s): 6705

SUBJECT: Cover – Defective Paint

PURPOSE: Small amounts of paint may come off with the packing tape when the tape is removed at installation of some "Selectric" IIIs.

SYMPTOM: This condition is most likely to occur on the left side of the machine near the seam between the center and bottom cover. The problem is limited to covers painted in Raven Black, Topaz Bronze and Marlin Blue.

SOLUTION: Use touch up paint (05-500, 501) or replace cover(s) as required.

REPORTING: All Branch Offices are to report activity on an I/PAR, entering CEM No. 456 in the Part Ref/Minor block.

MACHINES AFFECTED: Between approx. S/N: Type 6705, 5048500-5083310.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 33

457 SERVICE INFORMATION

7-15-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Cycle Clutch Spring – Redesigned

The extensions on the cycle clutch spring (23-404) have been changed to make them both the same length. The cycle clutch spring can now be installed with either extension to the left.

Parts Information: Existing field stocks will be used until depleted.

458 SERVICE INFORMATION

7-15-81

Type(s): 6126

SUBJECT: Rotary Backspace Bellcrank Stop – Level 1 Field Fix

The backspace bellcrank downstop (24-116) can be installed on a machine with all steel transport when the bellcrank upstop lug on the Level 1 backplate is weak or broken.

PROCEDURE:
1. Remove two L-1 backplate mounting screws (24-14 and 24-113).
2. Using a No. 22 bit, drill the threads out of the holes in the power frame from which the screws were removed.
3. Install the bellcrank downstop as shown in Figure 1 with two screws (24-114 and 24-117) and one washer (24-119). Use Level 2 adjustments to check backspace motion.

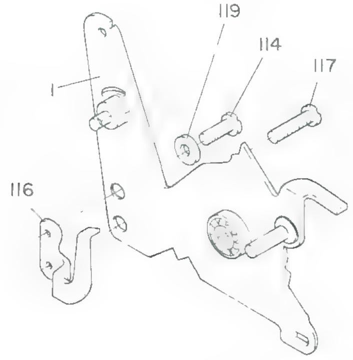


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
24	114	322065	Screw, Downstop	1	—
	116	1205943	Stop, Down	1	—
	117	1164581	Screw	1	—
	119	1090622	Washer	1	—

459 SERVICE INFORMATION

7-15-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Pawl Mounting Stud

Frame 119 of APM 241-5939-3 is incorrect. On NRB/S machines, the high lobe of the cam should be to the left and on RB/S machines, the high lobe of the cam should be to the right. This correction is shown in Figure 1. Mark this change in your APM.

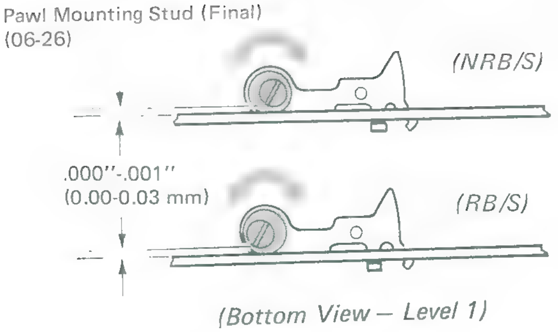


Figure 1

Use Applicable Service Code.

460 SERVICE INFORMATION

7-15-81

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Escapement Pawl Mounting Stud And Spacer (RB/S) – Redesigned

The Level 2 escapement pawl mounting stud (07-5) and spacer (07-3) have been redesigned to eliminate the need for the former level spacer (P/N 1204370) and shim (P/N 1290994).

When replacement of either the stud or the spacer is required on machine below the specified S/N range(s), replace both parts with the new level parts and discard the shim.

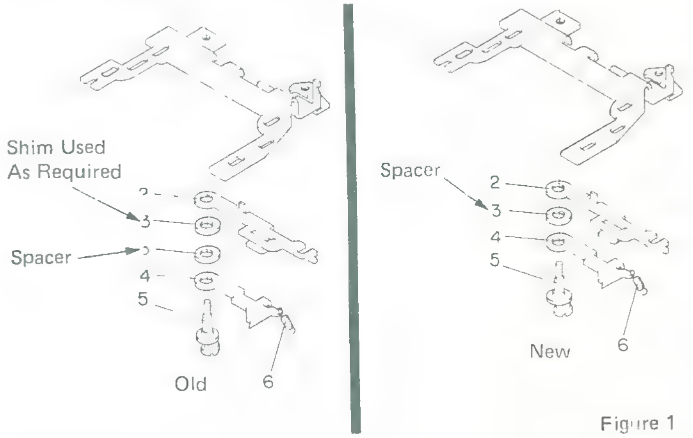


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
07	3	1256873	Spacer	1	—
	5	1256619	Stud, Pawl, L-2	1	-

MACHINES AFFECTED: S/N: (8X3) 5289139, (8X5) – 6868874, 6701 – 0001239, 6702 – 1003697, 6703 – 2005463, 6704 – 3003246, 6705 – 4110573.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

461 RELIABILITY

7-15-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Torque Limiter Hub – Defective

PURPOSE: Some machines were manufactured with an excessive taper on the shoulder portion of the torque limiter hub (25-3) (Figure 1).

SYMPTOM: The taper will result in the torque limiter spring (25-9), torque limiter arbor (25-11), CR spring (25-13) and CR pinion being driven to the right into the "C"-clip during machine operation. A binding condition or premature wear of these parts can occur.

SOLUTION: When experiencing this symptom, replace the torque limiter (25-3). Examine the other affected parts and replace as necessary.

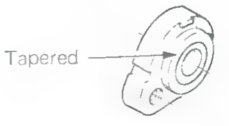


Figure 1

(Continued)

MACHINES AFFECTED: Approx S/N: Type 6121 (Model 7X1) 0918226-0955085; Type 6126 (Model 8X3) 5261152-5295026; Type 6126 (8X5) 6777398-6882781; Type 6126 (Model 895) 4960127-4993029; Type 6701, 0000159-0004723; Type 6702, 1003579-1004433; Type 6703, 2004488-2007464; Type 6704, 3000999-3005259; Type 6705, 4045275-4158376; Type 6705, 5009200-5066000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Service Code 33

This CEM Expires: 4-1-82

462 SERVICE INFORMATION

7-15-81

Type(s): 6704, 6705

SUBJECT: PN/PL Correction

The margin pointer (10-100) should be P/N 1254997. Mark this change in your PN/PL.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
10	100	1254997	Margin Pointer — Dual Pitch	1	—

463 SERVICE INFORMATION

8-26-81

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Screws Changed In Cycle Clutch Bracket

CSI INFORMATION: The screws (21-228) that mount the bracket (21-532) that holds the guide assembly (21-530) have been lengthened. This change was made to eliminate the possibility of the screws stripping.

NOTE: On machines that have this change, there may be some interference when using the Hooverometer to make the "power on" adjustments. The red handle brush (P/N 0003701) or any other suitable tool can be used on these machines.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

464 SERVICE INFORMATION

8-26-81

Type(s): 6126, 6703, 6704, 6705

SUBJECT: Correcting Lift and Feed Actuator Stud

SYMPTOM: The correcting lift and feed actuator stud (25-54) may be replaced with P/N 1466537 currently used in Mag Card. This stud has a slotted head for easier installation and removal.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
26	54	1466537	Stud	1	.40

465 SERVICE INFORMATION

8-26-81

Type(s): 6121, 6126

SUBJECT: A-Frame Replacement On Pre-Eccentric Overthrow Stop Machines

The A-frame asm. (22-228) is now available with eccentric index overthrow stop only. When replacing the A-frame asm. on pre-eccentric overthrow stop machines, it may be necessary to remove some material from the power frame with a file or other suitable tool in the area directly below the eccentric overthrow stop. This eliminates interference with proper platen height adjustment on the right side.

CAUTION: Use shop towels or other protection to keep metal filings away from other mechanisms.

466 SERVICE INFORMATION

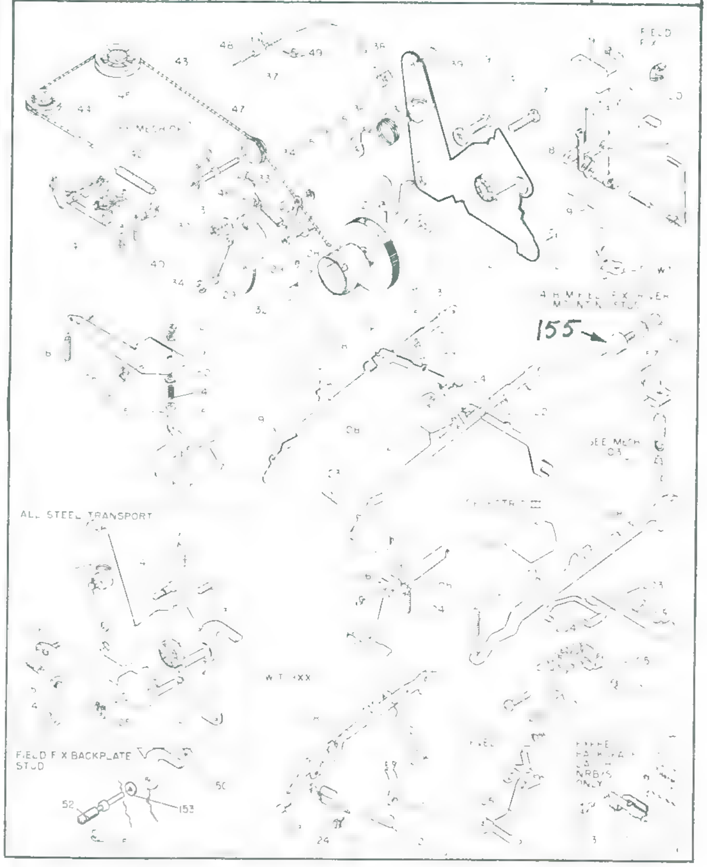
8-26-81

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: APM Correction – Backspace Driver Mounting Stud

PURPOSE: The reference number for the field fix backspace driver mounting stud is incorrect. It should be part reference 24-155. Mark this correction in your APM.

ROTARY BACKSPACE/EXP. BACKSPACE MECH. CODE 24



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(CEM No. 471 Continued)

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	3	1256038	Bushing	1	.08

MACHINES AFFECTED: Between approx. S/N: Type 6121 (7X1) — 0949339 and 0972293; Type 6126 (8X3) — 5291541 and 5302254; Type 6126 (8X5) — 6874286 and 6904004; Type 6701 — 0003427 and 0006099; Type 6702 — 1003772 and 1008303; Type 6703 — 2005916 and 2015145; Type 6704 — 3003740 and 3009042; Type 6705 — 4136809 and 4235975.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Former level bushings are no longer available.

Use Applicable Service Code

472 SERVICE INFORMATION

10-21-81

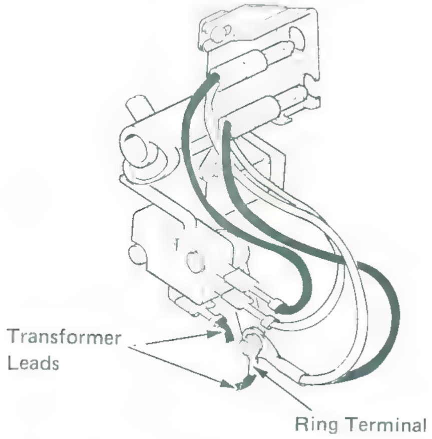
Type(s): 6704, 6705

SUBJECT: Transformer Motor

A new motor has been released that includes a **built-in transformer** to provide margin lamp voltage for "Selectric" III 115V — 60Hz dual pitch machines.

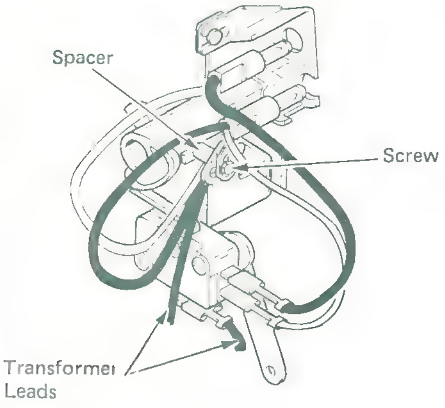
The method of connecting the secondary wiring at the margin light switch plate (10-109) has also been changed. Figure 1 shows the old method of connection and Figure 2 shows the new. The switch plate will be redesigned as illustrated in Figure 3. The old plate will be used until stock is depleted but the wires will be connected as illustrated in Figure 2.

If a transformer motor is used as a replacement part, the new method of wiring (Figure 2) must be used. It is not necessary to change the wire connections on machines with the previous transformer (11-603).



Old

Figure 1



New

Figure 2

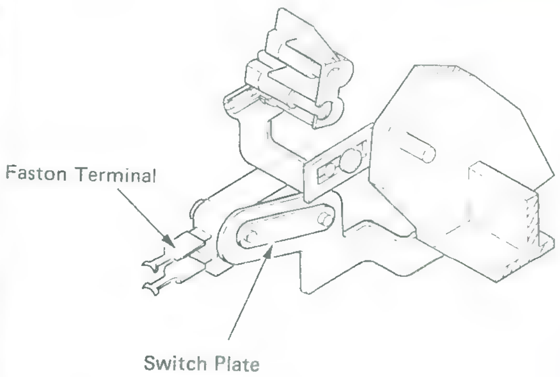


Figure 3

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
10	121	1336413	Screw, Long		.07
	123	1336772	Spacer		—
11	40	1304774	Transformer Motor		—
	83	1304713	Ring Terminal		.25
	88	5412817	Faston Terminal		.30

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

TIMELY INFORMATION PROGRAM

10-7-81

Type(s): 6126, 6703, 6704, 6705

SUBJECT: Correction Shadows — RB/S

To improve the reliability of correction lift-off and reduce shadows, maintain the RB/S motion adjustment in the upper portion of the adjustment range [.015"-.045" (0.38-1.14 mm)]. The increased overthrow motion helps to ensure the carrier will come to rest in the same position after a backspace operation as the previously typed character.

The backspace latch height adjustment, on Level 1 machines, should be set at the low end of the range [.001"-.020" (0.03-0.51 mm)] to ensure adequate motion is available.

NOTE: This procedure will not compensate for worn parts or incorrect adjustments.

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CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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A complete set of current "Selectric" Typewriter CEM materials consists of "Selectric" Combined Service Information booklet (F/N 241-5114-1) dated May, 1979, CEMs starting on page one (reissued 7-3-79) and the Technical Information Index found in the back of the Part Number/Price List (F/N 241-5103).

300 SERVICE INFORMATION

10-8-75

Model 8XX

FEED GEAR ADJUSTMENT – SELECTIVE RIBBON

When replacement of feed gear (15-092) and intermediate gear (15-055) is necessary due to wear of the teeth, be sure the ribbon mode button grip clip is adjusted up or down on the ribbon feed post for .005"-.020" clearance between the lower feed gear and the first intermediate gear (with the mechanism in the film ribbon mode). The bottom of the large ribbon feed gear should be flush with the bottom of the small first intermediate gear.

FILM RIBBON MODE

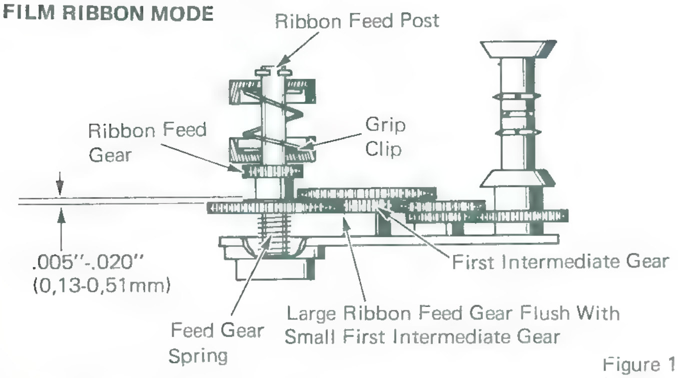

Ribbon Feed Post
Ribbon Feed Gear
Grip Clip
.005"-.020" (0,13-0,51mm)
First Intermediate Gear
Feed Gear Spring
Large Ribbon Feed Gear Flush With Small First Intermediate Gear

Figure 1

If adjustment is necessary—

a. Ensure the load lever spring clears the ribbon feed gear with a minimum of .005" in the ribbon load position. Form the load lever spring.

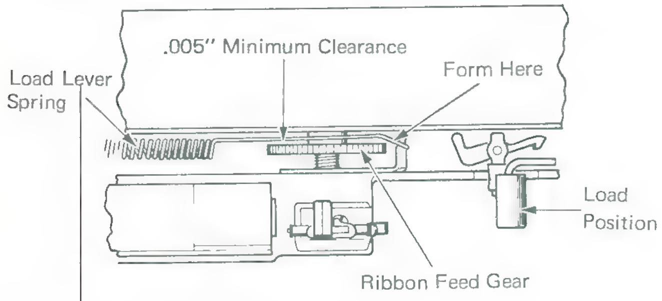


Figure 2

b. Ensure the loadlever spring clears the ribbon cartridge in the operated position. Form spring if necessary.

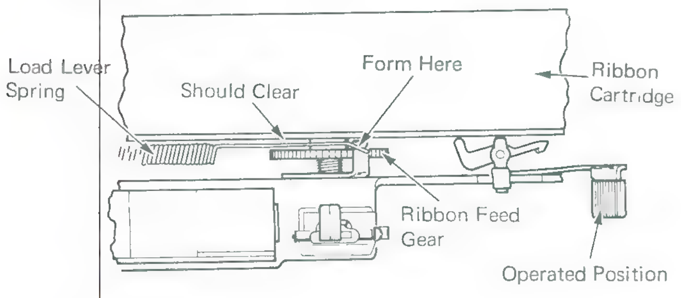


Figure 3

349 SAFETY

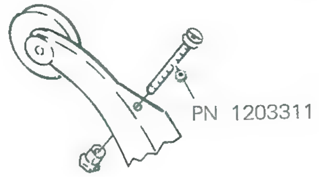
8-24-77

Model(s): 725

SUBJECT: Shift Adjusting Screw.

SAFETY LOCATION: Some reconditioned 725 "Selectric" machines have reached the field with a bristol head lower case adjusting screw in the shift arm. This bristol could cause hand injury when using the hand cycle wheel.

SAFETY PRECAUTION: Check lower case shift adjusting screw on next service call.



SAFETY CORRECTIVE ACTION: Replace bristol-type adjusting screw with fillister head screw (P/N 1203311).

Note: This change applies only to reconditioned 725's that were converted from Selectric I/O's. Part references are shown in the MT/ST—I/O APM (16-49, P/N 1203311).

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .2

Use Service Code 32

This CEM Expires 7-1-80

362 RELIABILITY

5-3-78

Model(s): 8XX

SUBJECT: Torque Limiter Arbor – Defective

PURPOSE: Some machines may have reached the field with edge of the torque limiter arbor (25-11) rounded (Figure 1).

SYMPTOM: The rounded edge may allow the torque limiter spring (25-09) to drop between the hub (25-03) and arbor.

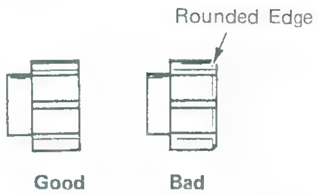


Figure 1

SOLUTION: Change arbor.

MACHINES AFFECTED: 8X5/3688555 — 3721131, 8X3/1921645 — 1933765.

Use Service Code 32

This CEM Expires 5-3-79

365 RELIABILITY

5-31-78

Model(s): 8XX Selectrics

(Revised) 7-12-78

SUBJECT: Double Index – Plant Installed

PURPOSE: To identify wrong parts installed in double index mechanism.

SYMPTOM: With incorrect parts installed, the index mechanism may cycle only once or might give extra cycles.

SOLUTION: Check the index bellcrank (20-14) and the index latch (03-405). The double index parts shown below should be installed to correct unreliable cycling of the operational cam.

(Continued)

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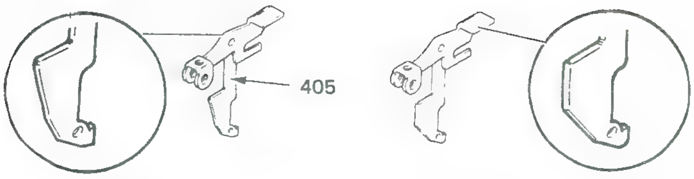
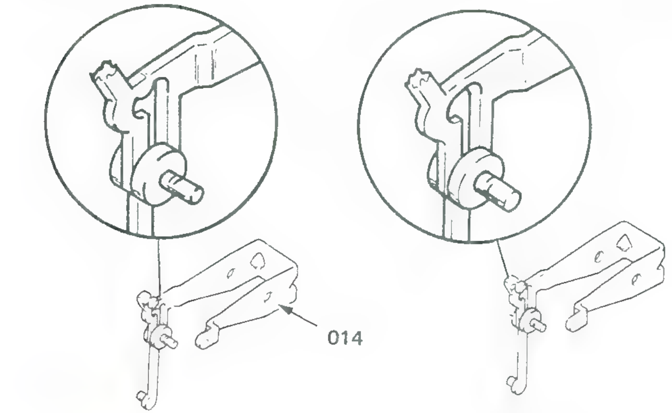
(CEM 365 Continued)



Double Index Latch

Standard Latch

Fig. 1



Double Index Bellcrank

Standard Bellcrank

Fig. 2

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
03	405	1287869	Latch 7X1	1	1.75
		1287870	Latch XX3, XX5	1	1.75
20	14	1287871	Bellcrank XX3	1	1:90
		1287872	Bellcrank XX5	1	1.85

MACHINES AFFECTED: 7X1 — Below approx. 0695967, 8X3 — below approx. 1762633, 8X5 — below approx. 3326186.

ESTIMATED INSTALLATION TIME: 1.0 Hr.

Use Service Code 32 This CEM Expires 5-31-79

366 RELIABILITY

7-12-78

Model(s): 8X3 Selectric Typewriters

SUBJECT: Court Reporting Platen

PURPOSE: To identify incorrectly ground platens. Court reporting platens are identified with an "0" stamped in the left end plug. Some court reporting platens (12-16) may have reached the field ground to the same diameter as a standard platen and still have the "0" identification.

SYMPTOM: Experiencing incorrect linespacing, when all adjustments appear correct and a "0" is stamped in the end plug of the platen.

SOLUTION: Replace the platen.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
12	16	1290726	Court Reporting Platen	1	25.00

.**MACHINES AFFECTED:** Approximately 8X3 above 26-1904200.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .2 Hr.

Use Service Code 17 This CEM Expires 7-12-79

367 RELIABILITY

7-12-78

Model(s): All

SUBJECT: Ball Joint — Out Of Spec.

PURPOSE: Some machines have reached the field with the ball joint (02-414) machined too short on one end and/or the slots cut in an "X" pattern on one end.

SYMPTOM: When experiencing malselection or rotate problems and all adjustments appear correct, check the ball joint.

SOLUTION: Change ball joint.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	414	1124220	Ball Joint	1	1.85

MACHINES AFFECTED: 7X1 0734400 — 0743100, 8X3 1874200 — 1904200, 8X5 3577300 — 3648600

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .1 Hr.

Use Service Code 32 This CEM Expires 7-12-79

374 RELIABILITY

10-18-78

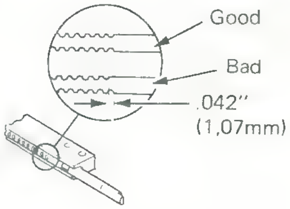
Model(s): 87X, 89X

SUBJECT: Dual Pitch Margin/Escapement Racks — Teeth Cut Incorrectly

PURPOSE: This condition may appear on margin racks (10-22) or escapement racks (7-10). Working surfaces of 10 and 12 pitch rack teeth should line up at position zero, and should repeat at 1/2 inch intervals thereafter. This relationship may be off by as much as .042" (1,07mm) on the defective racks (Figure 1).

SYMPTOM: Unable to adjust overbank in both 10 and 12 pitch. To check for a defective rack, observe the zero position rack teeth while switching between 10 and 12 pitch. (Make a reference mark or scribe line on the rail.) The working surface of the 10 and 12 pitch teeth should not appear to change positions on a good rack.

SOLUTION: If there is a difference between 10 and 12 pitch rack teeth at position zero, change the rack.



Note: Margin Rack Shown; Observe Escapement Rack In Similar Manner

Fig. 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
7	10	1206844	8 X 3 ESC Rack, Level 3	1	4.80
		1206845	8 X 5 ESC Rack, Level 3	1	5.15
10	22	1205537	Rack, Margin 8 X 3	1	2.80
		1205538	Rack, Margin 8 X 5	1	3.00

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32 This CEM Expires 9-1-79

377 SERVICE INFORMATION

11-29-78

Model(s): 7XX, 8XX

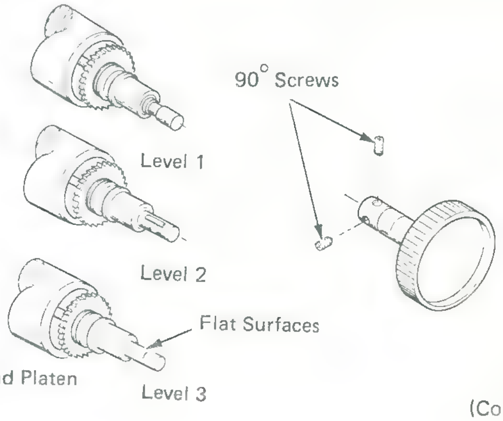
(Revised) 1-30-80

SUBJECT: Platen Knobs

Level 2 platen knobs (12-55) are now being manufactured with the setscrews in line to reduce possibility of knob loosening.

Levels 1 and 2 platen knobs (12-55) can be used on any left-hand platen shaft.

Level 1 platen knobs can be used on all right-hand platen shafts providing one screw is contacting the flat surface of Levels 2 and 3 shafts (Figure 1).



Right-Hand Platen Shafts

Figure 1

(Continued)

(CEM 377 Continued)

Level 2 platen knobs (12-55), in-line screws, can only be used on Levels 2 and 3 right-hand platen shafts (Figure 2).

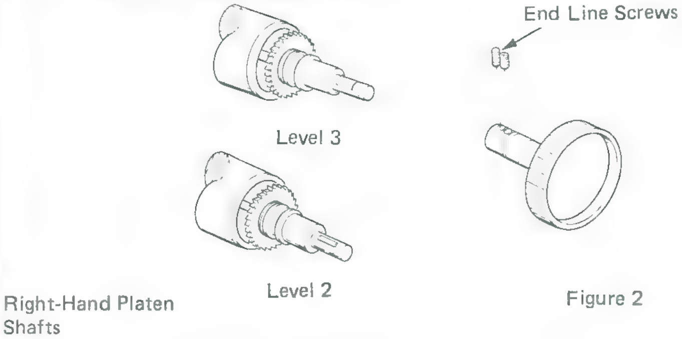


Figure 2

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
12	55	1205427	Knob (In-Line Screws), Level 2	1	1.40
	55	1256532	Knob, 90 Degree Screws, Level 1	1	1.40

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

378 SERVICE INFORMATION

1-17-79

Model(s): IBM "Selectric" II

SUBJECT: Motors

Some 115 V 60 Hz motors with a longer shaft on the left hand side have been used in producing "Selectric" II typewriters (Fig. 1). These motors are identical to the standard 115 V 60 Hz double insulated motor except for the longer shaft and a white identification label on the underside of the motor. If replacement is required use the standard motor (11-40).

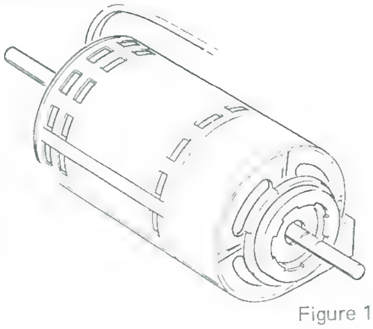


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
11	40	1147420	Motor, 115 V 60 Hz	1	62.25

379 RELIABILITY

1-17-79

Model(s): 7XX, 8XX

SUBJECT: Torque Limiter Hubs — Defective

PURPOSE: Some machines have been manufactured with a defective torque limiter hub (25-003), torque limiter screws (25-004) and/or bad end play adjustments.

SYMPTOMS:

1. Dropped loop on C/R pinion spring.
2. Dropped loop on torque limiter spring.
3. Worn C/R pinion "C" clip groove.
4. C/R pinion "C" clip missing.
5. Unresolved slow carrier return (adjustments appear correct).

SOLUTION: Replace torque limiter hub (25-003), and screws (25-004). Examine and replace other operational shaft parts as necessary.

MACHINES AFFECTED: 721 — 0778890, 0797028; 8X3 — 1989988, 5023017; 8X5 — 3867695, 6068040.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .5 Hr.

Use Service Code 32 | This CEM Expires 12-1-79

380 RELIABILITY

1-17-79

Model(s): 8 X 3, 8 X 5

SUBJECT: Keylever Pawl — Defective

SYMPTOM: Broken keylever pawl or intermittent tripping of the interposer due to cracked part.

SOLUTION: Replace keylever (21-105, 106, 107 or 108).

MACHINES AFFECTED: 8 X 3 — 5012751-5033724; 8 X 5 — 6036881-6104433.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32 | This CEM Expires 11-22-79

381 SERVICE INFORMATION

1-31-79
(Revised) 10-10-79

Model(s): All "Selectric" Typewriters Equipped With Spring Bias Tilt Rings

SUBJECT: Rotate Selection Adjusting Tool (P/N 9900633)

PURPOSE:

1. Faster adjustment procedure.
2. More accurate adjustments.
3. To determine if machine is within specification without element.

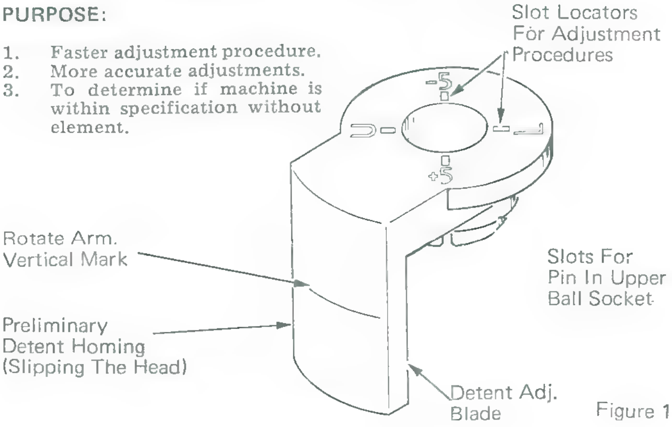
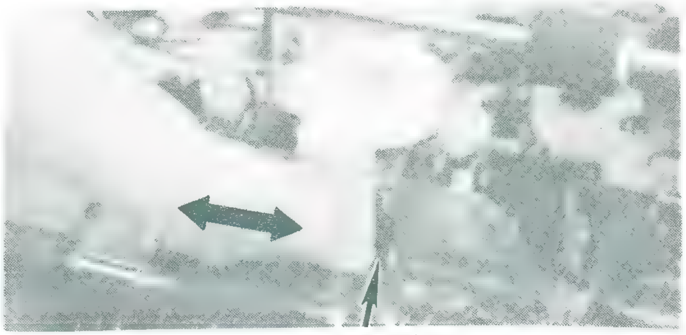

Slot Locators For Adjustment Procedures
-5
+5
Rotate Arm Vertical Mark
Slots For Pin In Upper Ball Socket
Preliminary Detent Homing (Slipping The Head)
Detent Adj. Blade

Figure 1

HOW TO USE TOOL PROPERLY

Proper adjustment is obtained with the rotate adjusting tool when the following two conditions are met:

1. No clearance exists between the blade of the rotate tool and the rotate detent (Fig. 2).



No Clearance Between Detent And Blade Of Tool
CORRECT Method To Check Adjustment

Figure 2

(Continued)

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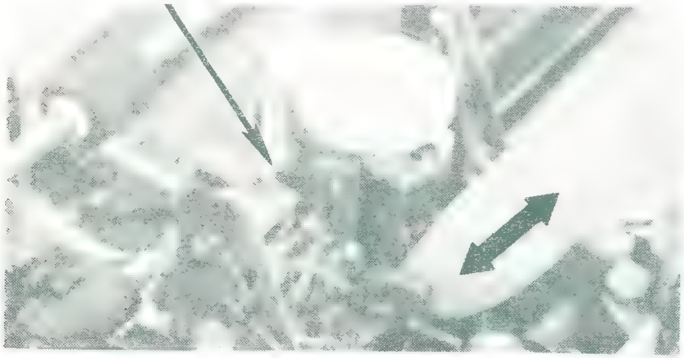
2. **Detent should restore with no binds against the blade of the tool** (Figure 3).

Note: Do not bias the tool in any direction when checking condition No. 2.

Detent Restores With No Binds



Note: Check Detent Guide For Binds

Figure 3

Since the entry of the rotate detent is controlled by correct seating of the tilt detent, it is necessary that the tilt detenting be set up first.

7XX "Selectrics" equipped with the wear compensator cannot be adjusted with the rotate selection adjusting tool unless the compensator arm is disabled using the procedure found on page 59 in the "Selectric" Service Manual, F/N 241-5615.

CAUTION: It is possible for the blade of the tool to bind against the backup shoe on the tilt ring. Therefore, it will be necessary to remove the tool before half cycling the machine for the next adjustment.

ADJUSTMENT PROCEDURE

ROTATE ARM VERTICAL

This is a preliminary adjustment and is made by adjusting the turnbuckle on the rotate link. Adjust the link so that the center of the top of the rotate arm is in line with the scribe line on the blade of the rotate tool (Fig. 4). Tilt the machine in the service position and observe from the bottom of the machine.

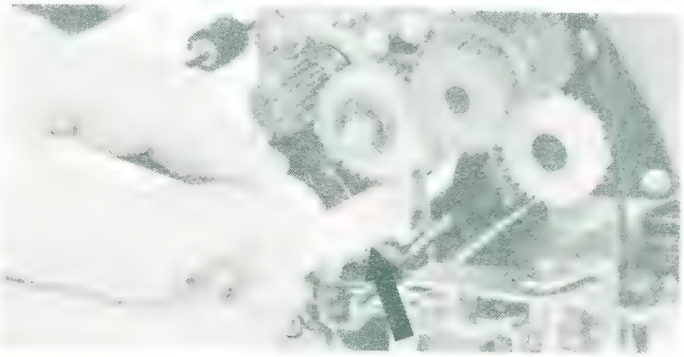
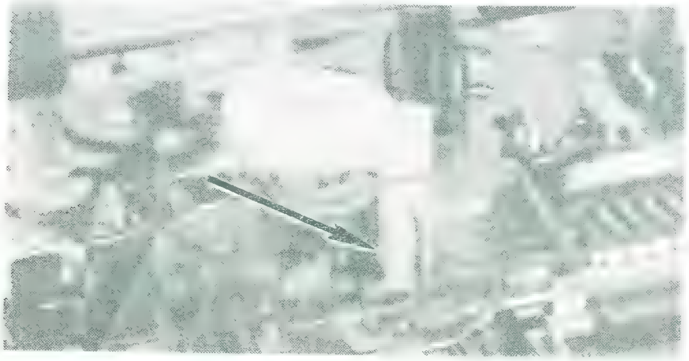


Figure 4

PRELIMINARY HOMING

Half cycle an UPPER CASE "I" with the carrier positioned over the cycle shaft area to aid in loosening the rotate pulley screw. Install the rotate tool with the pin on the upper ball socket located in the "U" (uppercase) slot in the rotate tool (Fig. 5). Loosen the setscrew in the rotate pulley and then turn the tool in a clockwise direction until it touches the rotate detent and hold it in this position while tightening the setscrew.

Note: This is the only time the tool will be used on this side of the rotate detent (Fig. 5).



Hold Blade Of Tool Against Detent – Do Not Check For Clearance Between Blade And Detent For This Adjustment Only

Figure 5

1. **Zero Rotate** — With the machine in UPPER CASE half cycle a "1/4" (zero rotate, tilt 2). Install the tool with the pin on the upper ball socket in the U slot of the rotate tool. Adjust the turnbuckle so that no clearance exists between the blade of the rotate tool and the rotate detent (Fig. 6). Detent must restore with **no binds**.

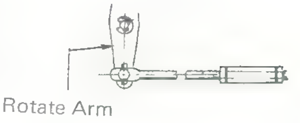


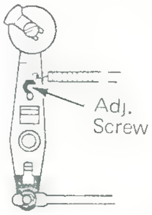
Figure 6

Note: Leave the turnbuckle loose at this time.

Remove tool.

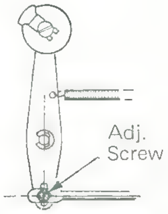
2. **+5 Motion** — Half cycle an UPPER CASE "W" (+5 rotate, tilt 2) and install the rotate tool with the pin on the upper ball socket in the +5 slot of the rotate tool.

Adjust the link up or down on the rotate arm to remove all clearance between the blade of the rotate tool and the rotate detent without binding the detent (Fig. 7, Fig. 8).



Two Piece Rotate Arm

Figure 7



Solid Rotate Arm

Figure 8

Remove tool.

3. a. **–5 Motion** — Half cycle an UPPER CASE "M" (–5 rotate, tilt 2) and install the rotate tool with the pin on the upper ball socket in the –5 slot of the tool. Readjust the turnbuckle to remove all clearance between the blade of the rotate tool and the rotate detent. The detent must restore with **no binds**. Tighten the turnbuckle (Fig. 9).

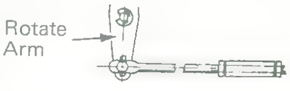


Figure 9

Remove tool.

b. Next half cycle an UPPER CASE "1/4" (zero rotate, tilt 2) and install the rotate tool with the pin on the upper ball socket in the U slot of the rotate tool. Adjust the –5 stop screw for no clearance and no binds between the blade of the tool and rotate detent (Figure 10A).

Note: This adjustment is used for both the two-piece and solid balance arm. It may be necessary to preset the two-piece balance arm by aligning the notches as shown in Figure 10B.

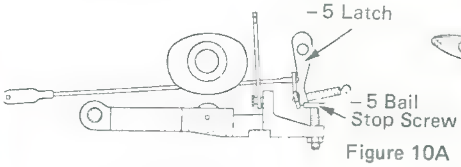


Figure 10A

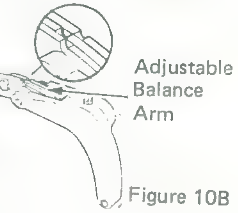


Figure 10B

Adjusting the –5 stop screw up decreases the clearance between the blade of the tool and the detent.

Remove tool.

4. **Shift Motion** — With the machine in LOWER CASE half cycle a "1/2" (zero rotate, tilt 2). Install the rotate tool with the pin on the upper ball socket in the L slot in the rotate tool. Adjust the shift stop screw in or out for no clearance and no binds between the blade of the tool and rotate detent (Fig. 11).

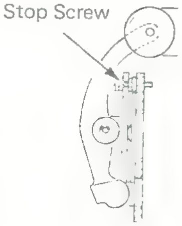


Figure 11

Remove tool.

DIAGNOSTIC TIPS

1. All rotate latches should restore at approximately the same time the check pawl latches in the cycle clutch.

2. With the machine in the rest position, the –5 stop screw can be preset by turning it in until it bottoms and then by backing it out 1/2 turn. Ensure the cycle clutch latch pawl is in the window of the cycle clutch.

3. Check following areas:

   a. Skirt clearance
   b. Detent timing
   c. Rotate detent guide binding
   d. Rotate spring tension
   e. Excessive head play (worn dog bone): This can be checked after making the adjustment in step 1 of the adjustment procedure. Remove tool and install a good element. Half cycle a "1/4" and withdraw the rotate detent and turn the element counterclockwise. Release the detent; it should not enter the next tooth. If the detent does enter the next tooth, the head play is excessive and the dog bone and the upper and lower ball socket should be replaced.
   f. Binding rotate arm stud (unable to raise stud high enough in slot in rotate arm)

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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393 RELIABILITY

5-9-79

Model(s): 8XX

SUBJECT: Acoustical Hood Seal — Redesigned

PURPOSE: Acoustical hood seal has been redesigned for more durability and greater reliability.

SOLUTION: The new seal is a friction fit part that snaps on. Install as shown in Figure 1. Plant installed hoods will have the seal glued on for shipping purposes. If it becomes necessary to glue the seal, Eastman 910® or a similar type adhesive may be used.

Note: Do not get adhesive on the visible surface of the hood. Use safety precautions when using adhesives.

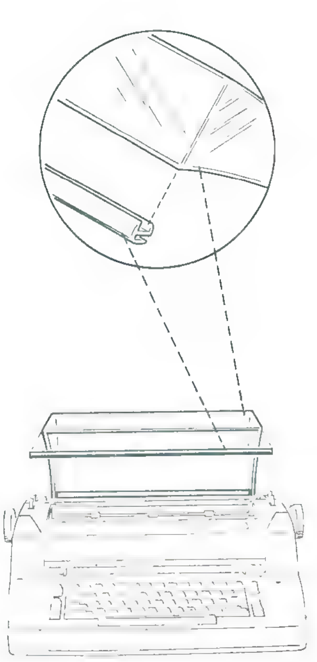


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
30	2	1205609	Seal Hood 8X3	1	.35
	2	1205608	Seal Hood 8X5	1	.30

Parts Information: Seal will be added to B/M (30-31) when stock is available.

394 SERVICE INFORMATION

6-20-79

Model(s): 7XX, 8XX

SUBJECT: Adjustment Parts Manual (APM) (F/N 241-5939-1) — Correction

The mechanism code for the film ribbon frame on page 70 is incorrectly listed as 13. It should be mechanism 14.

Mark this change in your Adjustment Parts Manual (Figure 1).

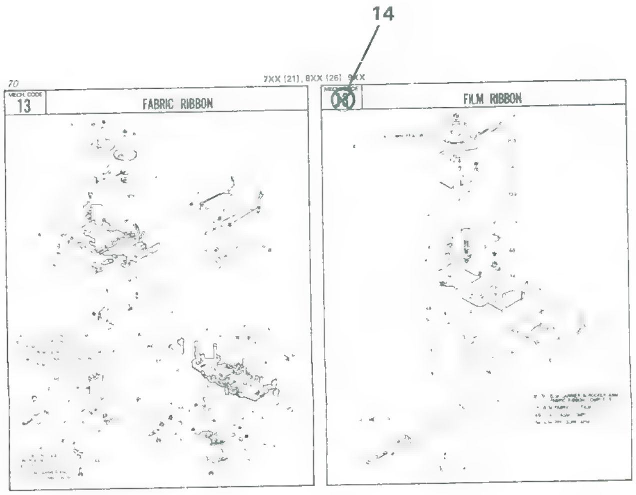


Figure 1

395 SERVICE INFORMATION

7-18-79

(Revised) 1-30-80

Model(s): 8XX

SUBJECT: Dual Transport Conversion

PURPOSE: Conversion from the steel cable transport system to the dual transport system is now possible without removing the backplate assembly. The following procedure and parts listed will reduce conversion time.

REMOVALS:

1. Remove — Covers, platen, deflector and RH dust shield
2. Remove — Switch from switch bracket
3. Remove — C/R cable and tab cable
4. Remove — Mainspring
5. Remove — C/R shoe bracket (03-500)
6. Remove — Escapement shaft. This can be done without removing the backplate. Break off the cable tension arm (24-4) (Figure 1). Hold the tension arm with a screwdriver and turn the escapement shaft (with gas pliers). This may damage the escapement shaft hub, which will be replaced with the new level.

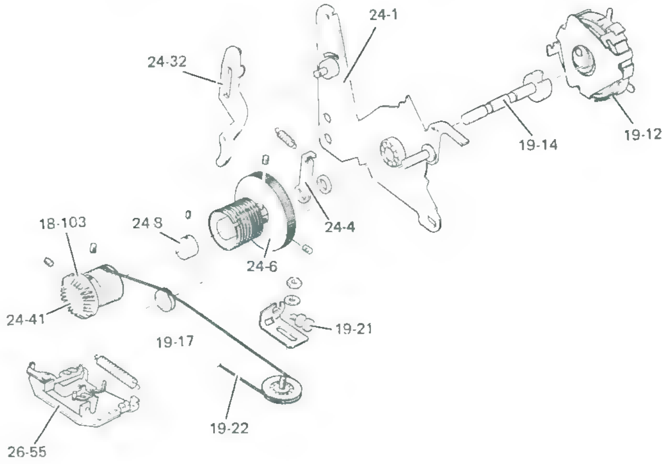


Figure 1

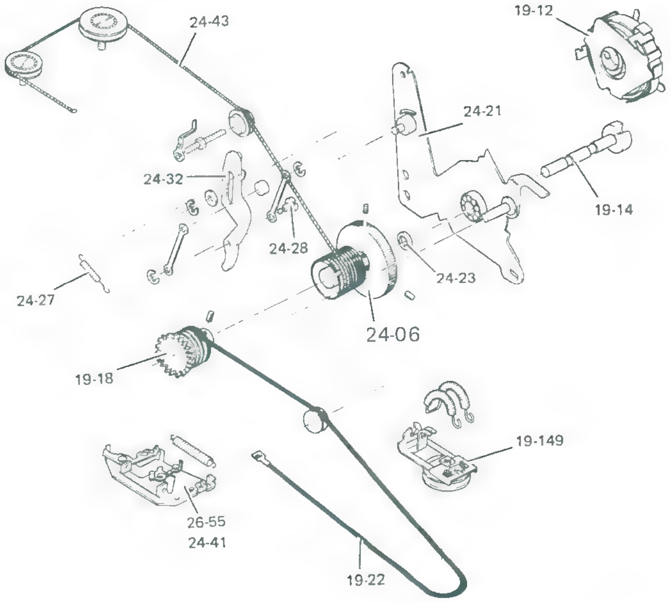


Figure 2

© IBM Corp. 1979, 1980

This process breaks out the D slot in the tension arm and will allow removal of the escapement shaft from the rear of the machine after setscrews are loosened in the tab drum (18-103) and collar (24-8).

7. Remove — B/S driver (24-32).
8. Remove — C/R, B/S drum (24-6) through the hole in the bottom of the power frame.
9. Remove — Cord anchor bracket (26-55) (24-41).
10. Remove — Transport pulley bracket (19-21).
11. Remove — Tab cord pulley (19-17).

INSTALLATION:

Installation of the dual transport parts can be done by reversing the removal procedure (Figure 2). Use the APM for the adjustment of these components. Also be sure to install the driver mounting stud (24-28) with the head against the backplate. Installation of the C/R steel cable and the tab cord is reviewed below:

Dual Transport System Installation:

Before installing the tab and C/R cord and cable, all other parts should be installed and adjusted properly.

1. Disconnect the carrier return unlatching link.
2. Manually latch the C/R and turn the turning wheel while counting the number of rotations of the escapement shaft, until the mainspring is wound the proper number of turns (Figure 3).

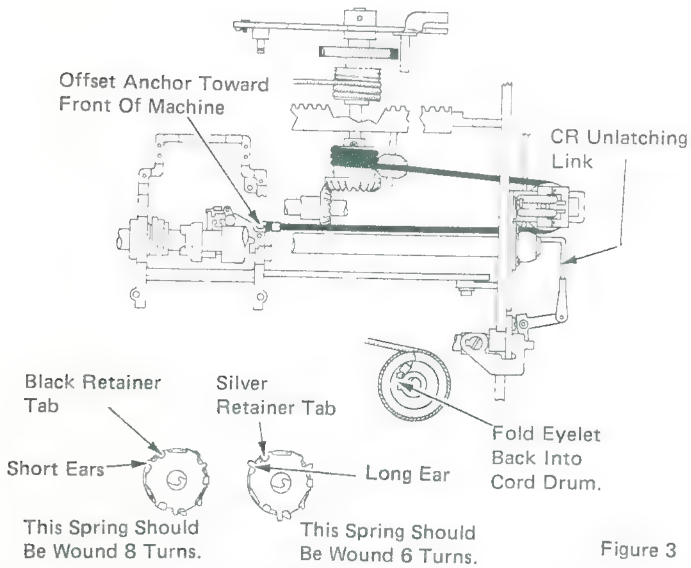

Offset Anchor Toward Front Of Machine
CR Unlatching Link
Black Retainer Tab
Silver Retainer Tab
Short Ears
Long Ear
Fold Eyelet Back Into Cord Drum.
This Spring Should Be Wound 8 Turns.
This Spring Should Be Wound 6 Turns.

Figure 3

3. With the carrier all the way to the left, connect the tab cord to the carrier and position the cord through the right power frame and around the transport pulley, then connect it to the front drum (Figure 3). It is not necessary to wind the cord around the drum. With the cord attached to both ends, unlatch the C/R and guide the cord onto the drum while rotating turning wheel. (This will wind the rest of the cord onto the drum.) Then place the cord on the cord pulley (19-17) (Figure 1).
4. Turn machine on and space or tab the carrier over the operational shaft area for easier installation of the C/R cable. Turn the machine off and be careful not to B/S or C/R, because it will unwind the tab card. Next, loosen the setscrews in the B/S drum. With the machine off, cycle a B/S operation until the driver engages the ratchet. This will help in the installation of the C/R cable.
5. Attach the cable to the anchor bracket. (Use the fork end of a spring hook.) Run the cable around the pulleys and tilt machine up. Hook the cable onto the B/S drum and hold in position while rotating ratchet to wind the excess cable onto the drum. This can be done by releasing the driver from the drum while holding and rotating the drum with the same hand. Hold tension on the cable with a spring hook from the left end of the machine. Do not position the cable around the front pulley (Figure 4) and take up all excess cable and then tighten the B/S drum. Hook the cable over the front pulley and check for proper adjustment of the transport pulley (Frame 117).
6. Connect C/R unlatching link.
7. Perform a functional check.

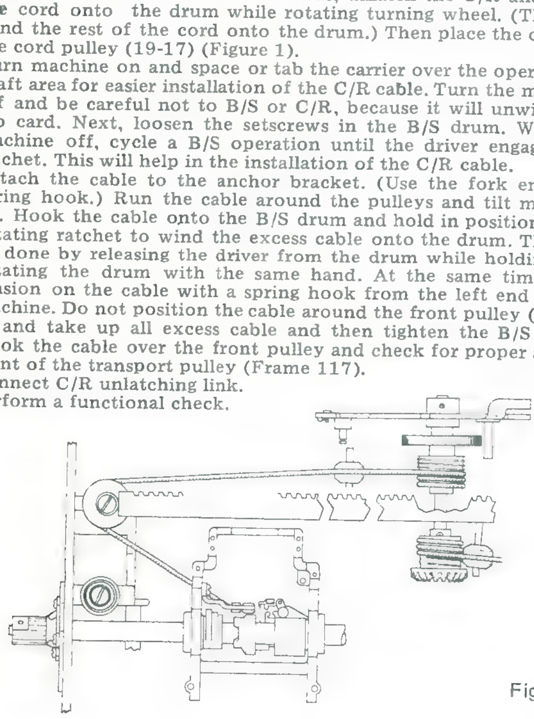


Figure 4

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
19	152	1279483	Conversion B/M — Also (Contains Ref. 149, 14, 17, 18, 22 6, 27, 28, 32, 41, 115, 26-55)		13.50
	149	1205784	Trans. Pulley B/M	1	2.20
	14	1164561	Escap. Shaft	1	.75
	17	1124628	Pulley	1	.45
	18	1128108	Tab Drum	1	1.20
	22	1175579	Cord	1	.35
24	6	1205779	B/S Drum	1	4.15
	27	1206990	Spring, Driver	1	.10
	28	1204058	Stud, Driver	1	.09
	32	1206908	Driver	1	1.80
	41	1205783	Bracket Dual Transport Sys Correcting	1	1.85
	115	151720	Setscrews	2	PP14
26	55	1290577	Bracket, Dual Pitch FTB	1	.65

Note: A B/M is now available. When using B/M, also order 1205777.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: 1 Hr.

Use Applicable Service Code

396 SERVICE INFORMATION

8-1-79

(Revised) 10-24-79

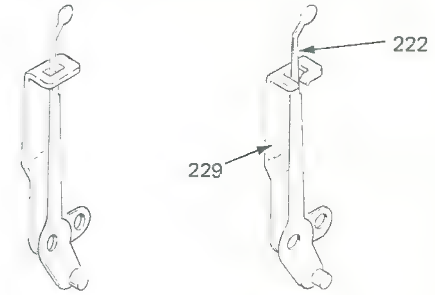
Model(s): 8XX

SUBJECT: **Velocity Lever Asm.**

For ease of plant assembly, an opening has been added to the upper portion of the velocity lever bracket.

SYMPTOM: On machines with the new level assemblies, parts can be replaced individually.

ADJUSTMENTS: All adjustments remain the same.



Old Level New Level

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	222	1206588	Velocity Lever (Selective Ribbon)	1	
		1141757	Velocity Lever (Non-selective Ribbon)	1	
	229	1141758	Velocity Lever Bracket (Selective And Non-selective Ribbon)	1	

Parts Information: Old level assemblies will not be available when current stock is depleted. When replacing old level assemblies it is necessary to order both individual parts.

397 SERVICE INFORMATION

8-1-79

Model(s): 8XX

SUBJECT: **Part Number/Price List (PN/PL) (F/N 241-5103-7) — Correction**

OBSOLETE

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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405 RELIABILITY

11-7-79

Model(s): 7XX, 8XX

SUBJECT: **Motor Pulley And Pawls — Defective**

SYMPTOM: Machine locks up or will not start due to failure of motor pawls to disengage from the motor pulley.

SOLUTION: Check for a minimum clearance of .005" (0.13 mm) between the motor pawls and the steps of the pulley. If this clearance does not exist, replace the motor pawls (11-43) and motor pulley (11-48).

Note: This applies to the one-piece pawl assembly only.

MACHINES AFFECTED: Between approx. S/N: 7X1 — 0797028-0853313, 8X3 — 5023017-5126951, 8X5 — 6068040-6388812.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32

This CEM Expires 9-1-80

406 SERVICE INFORMATION

11-7-79

Model(s): All "Selectric" Typewriters

SUBJECT: **Tilt Tapes — Labels Incorrect**

Some gear tilt tapes have the wrong machine size listed on the label (Figure 1). The part numbers and tapes are correct. Disregard tape size description or make appropriate change (Figure 2).

Incorrect Label	Correct Label
CORRECT P/N 1287881 TILT TAPE 7X3	CORRECT P/N 1287881 TILT TAPE 7X5
1287880 Tilt Tape 7X5	1287880 Tilt Tape 7X3
Figure 1	Figure 2

407 SAFETY

11-7-79

Model(s): All "Selectric" Typewriters

SUBJECT: **Heat Buildup**

SAFETY LOCATION: The motor vent grill.

SAFETY PRECAUTION: If the vent is blocked and the machine is left on, the parts can become hot enough to cause possible injury.

SAFETY CORRECTIVE ACTION: If the vent is blocked, remove the blockage. Advise the customer to maintain proper clearance to ensure air flow.

408 SERVICE INFORMATION

12-19-79

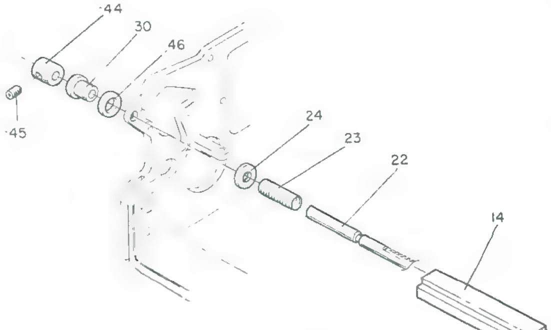
Model(s): 8XX

(Revised) 1-30-80

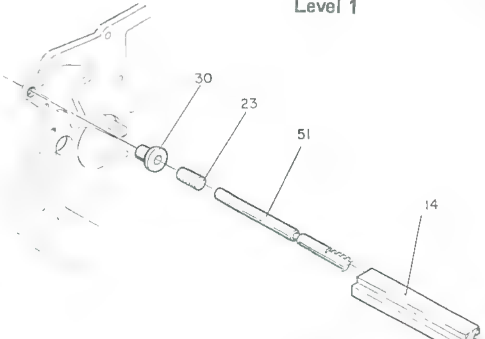
SUBJECT: **Margin Rack — Single Pitch (Rotary B/S)**

Two spacers (10-46, 24), a collar (10-44) and a setscrew (10-45) have been eliminated from the single pitch margin rack. This has been done by using a shorter spring (10-23) and installing the collar (10-30) from the opposite direction.

It is no longer necessary to use these parts (10-24, 45, 46). If replacement of these obsoleted parts is necessary, the new shorter spring (10-23) should be used and the parts assembled as in Figure 1 (Level 2).



Level 1



Level 2

Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
10 23	1256549	Spring	1	†

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .5 Hr.

409 SERVICE INFORMATION

1-30-80

Model(s): All

SUBJECT: **Paper Bail Arm Spring — Incorrect**

The paper bail arm springs (22-33) in parts packet No. 5 are incorrect. Scrap all paper bail arm springs in parts packet No. 5.

The paper bail arm springs have been deleted from parts packet No. 5.

Order replacement quantities under Mech. 22-33 or Mech. 26-209.

410 RELIABILITY

Model(s): Selectric

SUBJECT: **Ribbon Lift Arm — Stripped Screw**

PURPOSE: If the mounting screw hole for the ribbon lift arm (15-25) is stripped, an additional nut (15-5) can be added to the inside of the carrier to retain the screw (15-6).

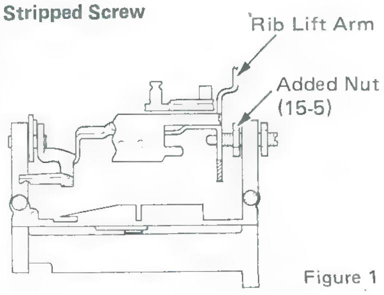


Figure 1

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411 SERVICE INFORMATION 1-30-80

Model(s): Dual Pitch 8XX

SUBJECT: Margin Rack Gear

A limited number of machines will be shipped to the field with 6-32 screws (P/N 1175107 parts package 01), instead of the standard 4-40 screw (P/N 1175102). Margin rack gears will be black and the screws will require using a number 6 fluted wrench.

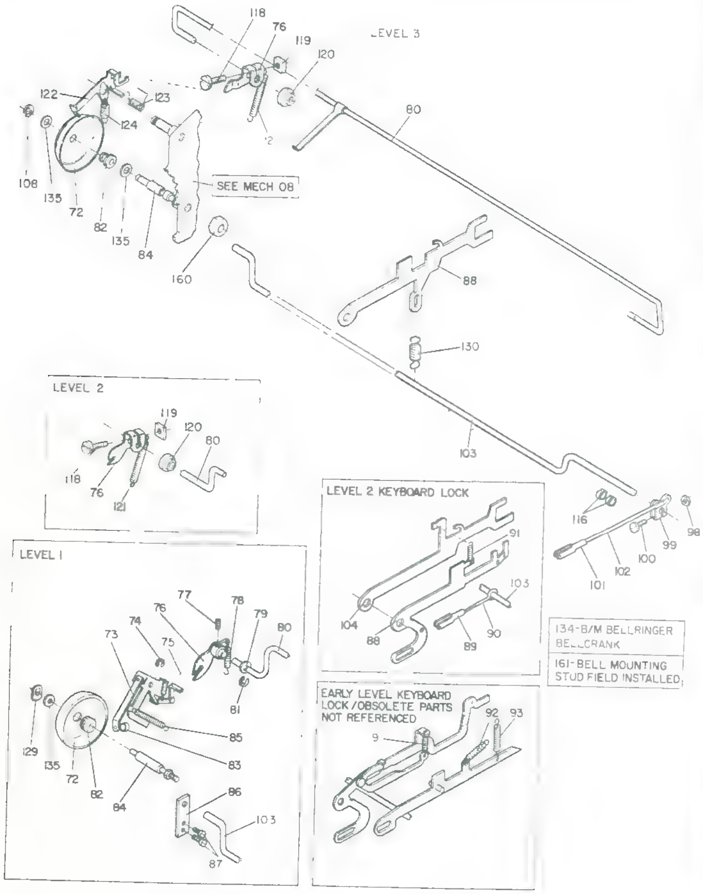
412 SERVICE INFORMATION 1-30-80

Model(s): 7XX, 8XX

SUBJECT: Bell Mounting Stud – Field Installable

A field installable bell mounting stud (09-84) is now available for current level machines.

It may be necessary to punch or drill the old stud out of the keyboard side frame.



MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
09	84	1279470	Stud, Bell Mounting	1	1.05
	160	37913	Nut	1	.08

MACHINES AFFECTED: Above S/N: 7X1 — 4011720, 7X3 — 4700000, 7X5 — 4350000.

TIP TIMELY INFORMATION PROGRAM 1-30-80

Model(s): Correcting Selectric

SUBJECT: Right-Hand Dust Cover Retainer Clip

Check the right-hand dust cover retainer (16-31) for interference with the correcting actuating link (26-086).

Form the bracket to ensure reliable operation of the correcting mechanism. This condition should be checked with the dust cover installed, because the cover will push the bracket toward the front of the machine.

TIP TIMELY INFORMATION PROGRAM 12-19-79

Model(s): 7XX, 8XX

SUBJECT: Motor Binds

Motor failures occurring because of binds in the motor shaft can be caused by misaligned bearings. The bearings are a self-aligning type and tapping lightly on the motor end bells and shell may correct the problem (Figure 1).

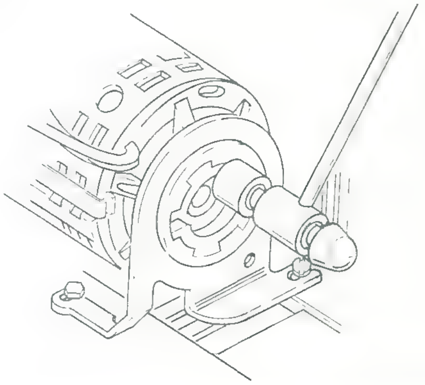


Figure 1

TIP TIMELY INFORMATION PROGRAM 12-19-79

Model(s): "Selectric II"

SUBJECT: Top Cover Pin

If a top cover pin is needed on a "Selectric" II cover, the "Selectric" I pin (04-85) can be used. This pin is shorter but will work on "Selectric" II if needed.

TIP TIMELY INFORMATION PROGRAM 12-19-79

Model(s): 8X3

SUBJECT: Platen Substitution On 8X3 Machines

Print and index problems can be caused by a 7X3 platen (12-16) being installed in an 8X3 machine.

The 7X3 right-hand platen shaft is too short to support the overall length of an 8X3 bushing, causing movement of the platen inside the bushing.

Do not substitute 7X3 platens on 8X3 machines.

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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405 RELIABILITY

11-7-79

Model(s): 7XX, 8XX

SUBJECT: Motor Pulley And Pawls — Defective

SYMPTOM: Machine locks up or will not start due to failure of motor pawls to disengage from the motor pulley.

SOLUTION: Check for a minimum clearance of .005" (0.13 mm) between the motor pawls and the steps of the pulley. If this clearance does not exist, replace the motor pawls (11-43) and motor pulley (11-48).

Note: This applies to the one-piece pawl assembly only.

MACHINES AFFECTED: Between approx. S/N: 7X1 — 0797028-0853313, 8X3 — 5023017-5126951, 8X5 — 6068040-6388812.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32

This CEM Expires 9-1-80

406 SERVICE INFORMATION

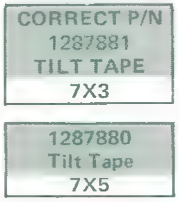
11-7-79

Model(s): All "Selectric" Typewriters

SUBJECT: Tilt Tapes — Labels Incorrect

Some gear tilt tapes have the wrong machine size listed on the label (Figure 1). The part numbers and tapes are correct. Disregard tape size description or make appropriate change (Figure 2).

Incorrect Label

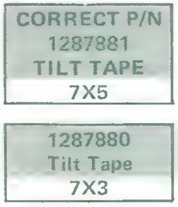


CORRECT P/N
1287881
TILT TAPE
7X3

1287880
Tilt Tape
7X5

Figure 1

Correct Label



CORRECT P/N
1287881
TILT TAPE
7X5

1287880
Tilt Tape
7X3

Figure 2

407 SAFETY

11-7-79

Model(s): All "Selectric" Typewriters

SUBJECT: Heat Buildup

SAFETY LOCATION: The motor vent grill.

SAFETY PRECAUTION: If the vent is blocked and the machine is left on, the parts can become hot enough to cause possible injury.

SAFETY CORRECTIVE ACTION: If the vent is blocked, remove the blockage. Advise the customer to maintain proper clearance to ensure air flow.

408 SERVICE INFORMATION

12-19-79

Model(s): 8XX

(Revised) 1-30-80

SUBJECT: Margin Rack — Single Pitch (Rotary B/S)

Two spacers (10-46, 24), a collar (10-44) and a setscrew (10-45) have been eliminated from the single pitch margin rack. This has been done by using a shorter spring (10-23) and installing the collar (10-30) from the opposite direction.

It is no longer necessary to use these parts (10-24, 45, 46). If replacement of these obsoleted parts is necessary, the new shorter spring (10-23) should be used and the parts assembled as in Figure 1 (Level 2).

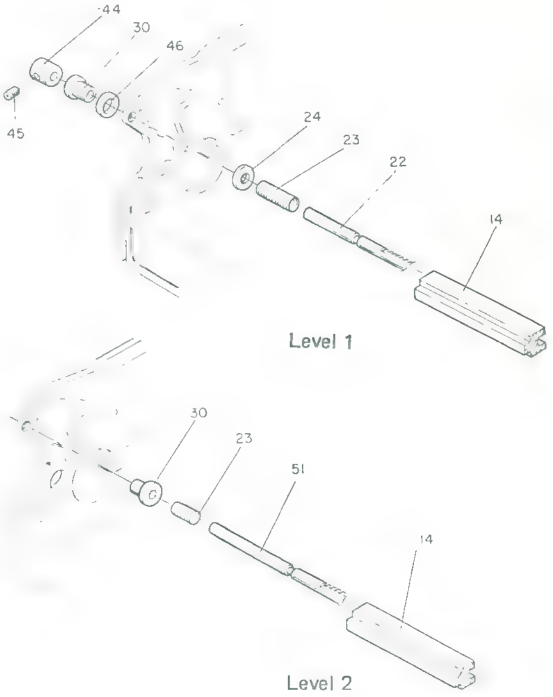


Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
10 23	1256549	Spring	1	†

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .5 Hr.

409 SERVICE INFORMATION

1-30-80

Model(s): All

SUBJECT: Paper Bail Arm Spring — Incorrect

The paper bail arm springs (22-33) in parts packet No. 5 are incorrect. Scrap all paper bail arm springs in parts packet No. 5.

The paper bail arm springs have been deleted from parts packet No. 5.

Order replacement quantities under Mech. 22-33 or Mech. 26-209.

410 RELIABILITY

Model(s): Selectric

SUBJECT: Ribbon Lift Arm — Stripped Screw

PURPOSE: If the mounting screw hole for the ribbon lift arm (15-25) is stripped, an additional nut (15-5) can be added to the inside of the carrier to retain the screw (15-6).

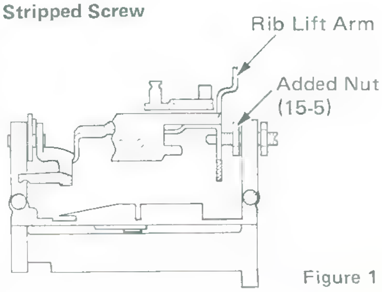


Figure 1

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411 SERVICE INFORMATION

1-30-80

Model(s): Dual Pitch 8XX

SUBJECT: Margin Rack Gear

A limited number of machines will be shipped to the field with 6-32 screws (P/N 1175107 parts package 01), instead of the standard 4-40 screw (P/N 1175102). Margin rack gears will be black and the screws will require using a number 6 fluted wrench.

412 SERVICE INFORMATION

1-30-80
(Revised) 2-13-80

Model(s): 7XX, 8XX

SUBJECT: Bell Mounting Stud — Field Installable

A field installable bell mounting stud (09-84) is now available for current level machines.

It may be necessary to punch or drill the old stud out of the keyboard side frame.

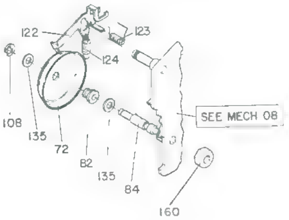

Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
09 84	1279470	Stud, Bell Mounting	1	1.05
160	37913	Nut	1	.08

MACHINES AFFECTED: Above S/N: 7X1 — 4011720, 7X3 — 4700000, 7X5 — 4350000.

413 RELIABILITY

2-13-80

Model(s): Correcting Selectric

SUBJECT: Correction Tape — Intermittent Feed Failures

Intermittent correction tape feed failures and/or incomplete lift off may be caused by a defective pawl feed mounting screw (26-5). The screw is undersize in the area where the washer (26-7) is mounted (Figure 1). This allows the washer to be off center and partially cover the teeth on the spiked take-up ratchet (Figure 2).

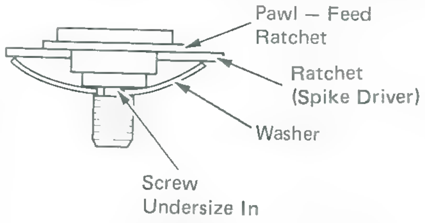

Figure 1

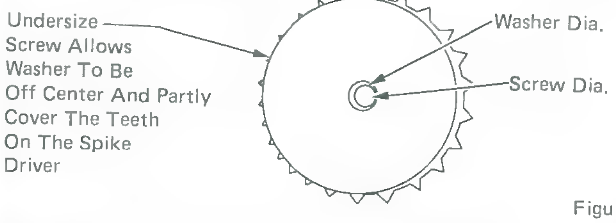

Figure 2

When experiencing this problem, replace the screw (26-5).

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
26 5	1290653	Screw	1	.15

MACHINES AFFECTED: 8X3 — 5147714 — 5181900; 8X5 — 6462050 — 6557510.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Service Code 32

This CEM Expires 12-1-80

414 SERVICE INFORMATION

2-13-80

Model(s): All "Selectrics"

SUBJECT: Index Pawl And Ratchet Alignment

Some indexing failures can be caused by bad alignment of the index pawl and platen ratchet. A combination of nylon shims placed between the ratchet retainer and bushing will provide proper alignment (Figure 1). These shims are in parts packet No. 8.

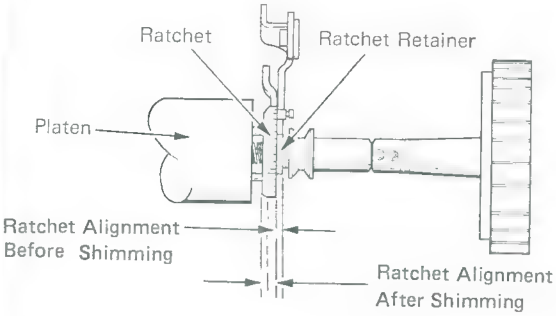

Figure 1

To provide alignment between the index ratchet and index pawl, a metal washer (02-44), P/N 1175868, is being installed between the retainer clip and the bushing on an "as needed basis." Both methods are acceptable.

TIP TIMELY INFORMATION PROGRAM

1-30-80

Model(s): Correcting Selectric

SUBJECT: Right-Hand Dust Cover Retainer Clip

Check the right-hand dust cover retainer (16-31) for interference with the correcting actuating link (26-086).

Form the bracket to ensure reliable operation of the correcting mechanism. This condition should be checked with the dust cover installed, because the cover will push the bracket toward the front of the machine.

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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405 RELIABILITY

11-7-79

Model(s): 7XX, 8XX

SUBJECT: Motor Pulley And Pawls — Defective

SYMPTOM: Machine locks up or will not start due to failure of motor pawls to disengage from the motor pulley.

SOLUTION: Check for a minimum clearance of .005" (0.13 mm) between the motor pawls and the steps of the pulley. If this clearance does not exist, replace the motor pawls (11-43) and motor pulley (11-48).

Note: This applies to the one-piece pawl assembly only.

MACHINES AFFECTED: Between approx. S/N: 7X1 — 0797028-0853313, 8X3 — 5023017-5126951, 8X5 — 6068040-6388812.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32

This CEM Expires 9-1-80

406 SERVICE INFORMATION

11-7-79

Model(s): All "Selectric" Typewriters

SUBJECT: Tilt Tapes — Labels Incorrect

Some gear tilt tapes have the wrong machine size listed on the label (Figure 1). The part numbers and tapes are correct. Disregard tape size description or make appropriate change (Figure 2).

Incorrect Label

CORRECT P/N
1287881
TILT TAPE
7X3

1287880
Tilt Tape
7X5

Figure 1

Correct Label

CORRECT P/N
1287881
TILT TAPE
7X5

1287880
Tilt Tape
7X3

Figure 2

407 SAFETY

11-7-79

Model(s): All "Selectric" Typewriters

SUBJECT: Heat Buildup

SAFETY LOCATION: The motor vent grill.

SAFETY PRECAUTION: If the vent is blocked and the machine is left on, the parts can become hot enough to cause possible injury.

SAFETY CORRECTIVE ACTION: If the vent is blocked, remove the blockage. Advise the customer to maintain proper clearance to ensure air flow.

408 SERVICE INFORMATION

12-19-79

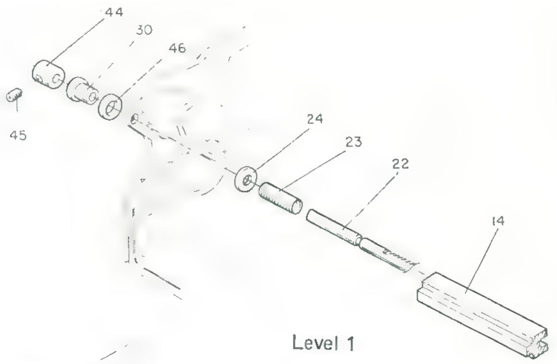
Model(s): 8XX

(Revised) 1-30-80

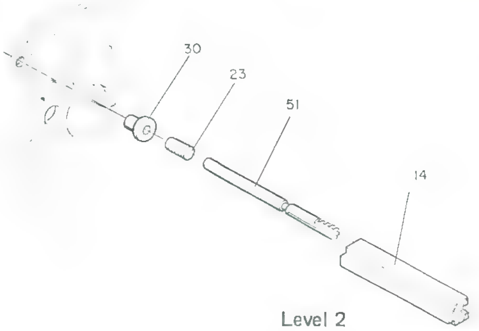
SUBJECT: Margin Rack — Single Pitch (Rotary B/S)

Two spacers (10-46, 24), a collar (10-44) and a setscrew (10-45) have been eliminated from the single pitch margin rack. This has been done by using a shorter spring (10-23) and installing the collar (10-30) from the opposite direction.

It is no longer necessary to use these parts (10-24, 45, 46). If replacement of these obsoleted parts is necessary, the new shorter spring (10-23) should be used and the parts assembled as in Figure 1 (Level 2).



Level 1



Level 2

Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
10 23	1256549	Spring	1	†

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .5 Hr.

409 SERVICE INFORMATION

1-30-80

Model(s): All

SUBJECT: Paper Bail Arm Spring — Incorrect

The paper bail arm springs (22-33) in parts packet No. 5 are incorrect. Scrap all paper bail arm springs in parts packet No. 5.

The paper bail arm springs have been deleted from parts packet No. 5.

Order replacement quantities under Mech. 22-33 or Mech. 26-209.

410 RELIABILITY

Model(s): Selectric

SUBJECT: Ribbon Lift Arm — Stripped Screw

PURPOSE: If the mounting screw hole for the ribbon lift arm (15-25) is stripped, an additional nut (15-5) can be added to the inside of the carrier to retain the screw (15-6).

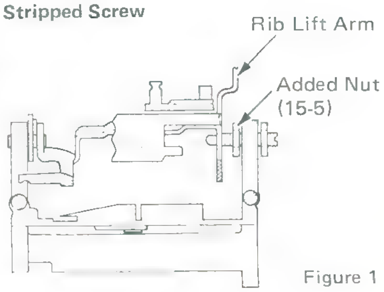


Figure 1

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411

SERVICE INFORMATION 1-30-80

Model(s): Dual Pitch 8XX

SUBJECT: Margin Rack Gear

A limited number of machines will be shipped to the field with 6-32 screws (P/N 1175107 parts package 01), instead of the standard 4-40 screw (P/N 1175102). Margin rack gears will be black and the screws will require using a number 6 fluted wrench.

412

SERVICE INFORMATION 1-30-80

(Revised) 2-13-80

Model(s): 7XX, 8XX

SUBJECT: Bell Mounting Stud — Field Installable

A field installable bell mounting stud (09-84) is now available for current level machines.

It may be necessary to punch or drill the old stud out of the keyboard side frame.

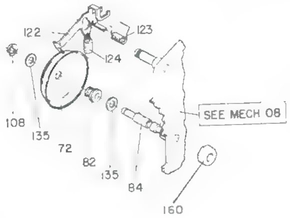

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
09	84	1279470	Stud, Bell Mounting	1	1.05
	160	37913	Nut	1	.08

MACHINES AFFECTED: Above S/N: 7X1 — 4011720, 7X3 — 4700000, 7X5 — 4350000.

413

RELIABILITY 2-13-80

Model(s): Correcting Selectric

SUBJECT: Correction Tape — Intermittent Feed Failures

Intermittent correction tape feed failures and/or incomplete lift off may be caused by a defective pawl feed mounting screw (26-5). The screw is undersize in the area where the washer (26-7) is mounted (Figure 1). This allows the washer to be off center and partially cover the teeth on the spiked take-up ratchet (Figure 2).

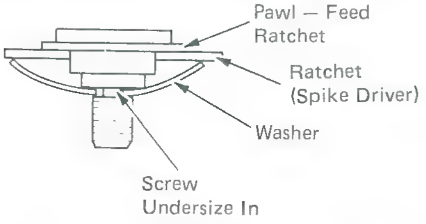

Figure 1

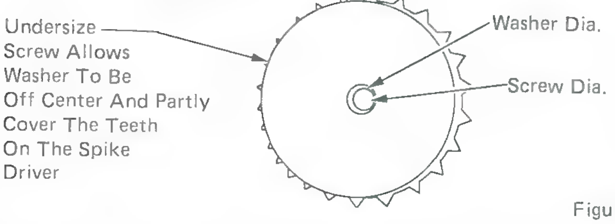

Figure 2

When experiencing this problem, replace the screw (26-5).

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
26	5	1290653	Screw	1	.15

MACHINES AFFECTED: 8X3 — 5147714 — 5181900; 8X5 — 6462050 — 6557510.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Service Code 32

This CEM Expires 12-1-80

414

SERVICE INFORMATION 2-13-80

Model(s): All "Selectrics"

SUBJECT: Index Pawl And Ratchet Alignment

Some indexing failures can be caused by bad alignment of the index pawl and platen ratchet. A combination of nylon shims placed between the ratchet retainer and bushing will provide proper alignment (Figure 1). These shims are in parts packet No. 8.

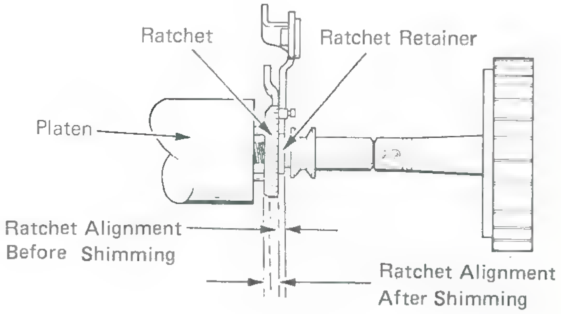

Figure 1

To provide alignment between the index ratchet and index pawl, a metal washer (02-44), P/N 1175868, is being installed between the retainer clip and the bushing on an "as needed basis." Both methods are acceptable.

415

RELIABILITY 2-27-80

Model(s): "Selectric" II And Correcting

SUBJECT: Escapement Bracket — Washer/Clip Added

A limited number of machines were manufactured with a "C"-clip or washer between the screw (19-7) and the tab lever (Figure 1).

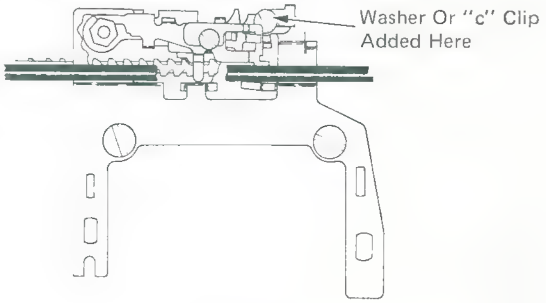

Figure 1

The washer or "C"-clip will prevent the tab lever from falling under the extension of the escapement bracket (Figure 2).

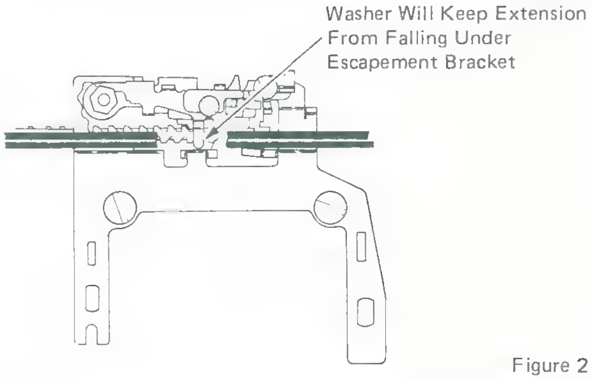

Figure 2

If experiencing a binding tab lever and the washer has been added, and normal adjustments do not correct the problem, replace the escapement bracket.

MACHINES AFFECTED: Approx. S/N: 8X5 — 6513000-6545800; 8X3 — 5155558-5188352.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: 2.0 Hrs.

Use Service Code 32

This CEM Expires 1/15/81

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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393 RELIABILITY

5-9-79

Model(s): 8XX

SUBJECT: Acoustical Hood Seal — Redesigned

PURPOSE: Acoustical hood seal has been redesigned for more durability and greater reliability.

SOLUTION: The new seal is a friction fit part that snaps on. Install as shown in Figure 1. Plant installed hoods will have the seal glued on for shipping purposes. If it becomes necessary to glue the seal, Eastman 910® or a similar type adhesive may be used.

Note: Do not get adhesive on the visible surface of the hood. Use safety precautions when using adhesives.

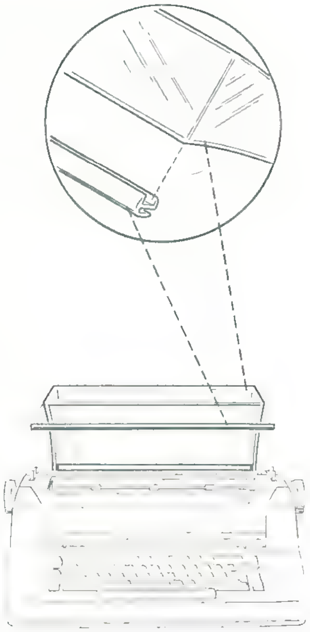

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
30	2	1205609	Seal Hood 8X3	1	.35
	2	1205608	Seal Hood 8X5	1	.30

Parts Information: Seal will be added to B/M (30-31) when stock is available.

394 SERVICE INFORMATION

6-20-79

Model(s): 7XX, 8XX

SUBJECT: Adjustment Parts Manual (APM) (F/N 241-5939-1) — Correction

The mechanism code for the film ribbon frame on page 70 is incorrectly listed as 13. It should be mechanism 14.

Mark this change in your Adjustment Parts Manual (Figure 1).

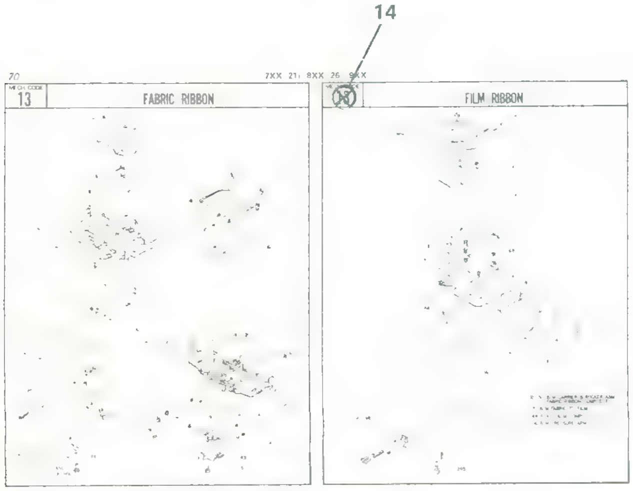

Figure 1

395 SERVICE INFORMATION

7-18-79

(Revised) 1-30-80

Model(s): 8XX

SUBJECT: Dual Transport Conversion

PURPOSE: Conversion from the steel cable transport system to the dual transport system is now possible without removing the backplate assembly. The following procedure and parts listed will reduce conversion time.

REMOVALS:

1. Remove — Covers, platen, deflector and RH dust shield
2. Remove — Switch from switch bracket
3. Remove — C/R cable and tab cable
4. Remove — Mainspring
5. Remove — C/R shoe bracket (03-500)
6. Remove — Escapement shaft. This can be done without removing the backplate. Break off the cable tension arm (24-4) (Figure 1). Hold the tension arm with a screwdriver and turn the escapement shaft (with gas pliers). This may damage the escapement shaft hub, which will be replaced with the new level.

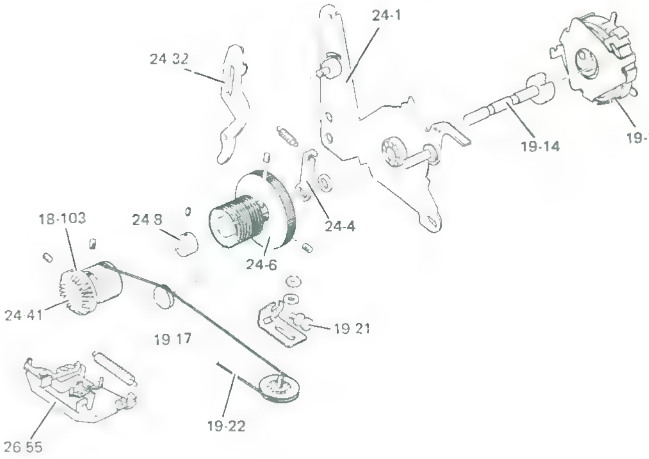

Figure 1

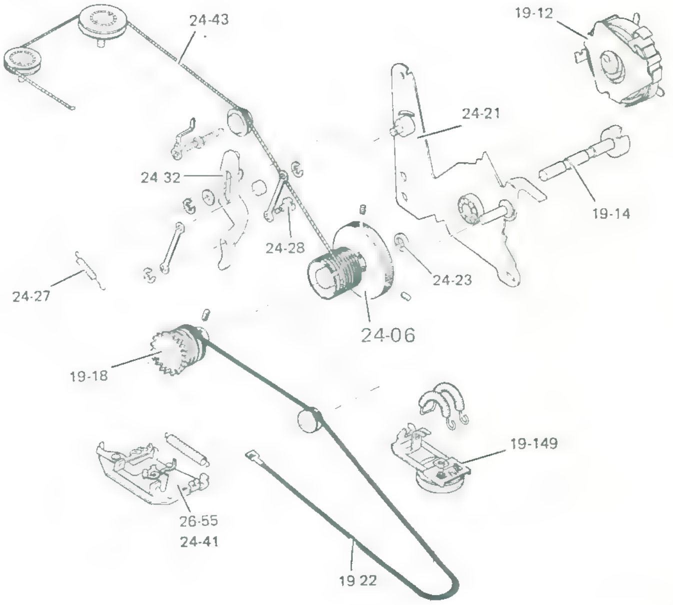

Figure 2

(Continued)

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(CEM 395 Continued)

This process breaks out the D slot in the tension arm and will allow removal of the escapement shaft from the rear of the machine after setscrews are loosened in the tab drum (18-103) and collar (24-8).

7. Remove — B/S driver (24-32).
8. Remove — C/R, B/S drum (24-6) through the hole in the bottom of the power frame.
9. Remove — Cord anchor bracket (26-55) (24-41).
10. Remove — Transport pulley bracket (19-21).
11. Remove — Tab cord pulley (19-17).

INSTALLATION:

Installation of the dual transport parts can be done by reversing the removal procedure (Figure 2). Use the APM for the adjustment of these components. Also be sure to install the driver mounting stud (24-28) with the head against the backplate. Installation of the C/R steel cable and the tab cord is reviewed below:

Dual Transport System Installation:

Before installing the tab and C/R cord and cable, all other parts should be installed and adjusted properly.

1. Disconnect the carrier return unlatching link.
2. Manually latch the C/R and turn the turning wheel while counting the number of rotations of the escapement shaft, until the mainspring is wound the proper number of turns (Figure 3).

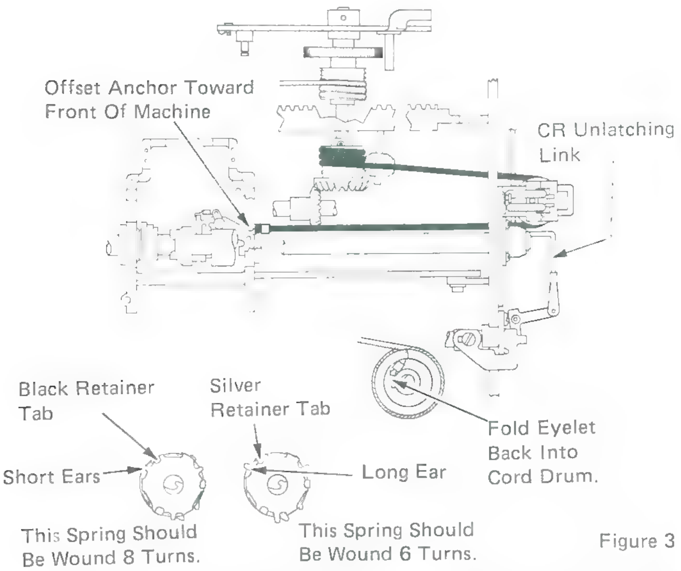


Figure 3

3. With the carrier all the way to the left, connect the tab cord to the carrier and position the cord through the right power frame and around the transport pulley, then connect it to the front drum (Figure 3). It is not necessary to wind the cord around the drum. With the cord attached to both ends, unlatch the C/R and guide the cord onto the drum while rotating turning wheel. (This will wind the rest of the cord onto the drum.) Then place the cord on the cord pulley (19-17) (Figure 1).
4. Turn machine on and space or tab the carrier over the operational shaft area for easier installation of the C/R cable. Turn the machine off and be careful not to B/S or C/R, because it will unwind the tab card. Next, loosen the setscrews in the B/S drum. With the machine off, cycle a B/S operation until the driver engages the ratchet. This will help in the installation of the C/R cable.
5. Attach the cable to the anchor bracket. (Use the fork end of a spring hook.) Run the cable around the pulleys and tilt machine up. Hook the cable onto the B/S drum and hold in position while rotating ratchet to wind the excess cable onto the drum. This can be done by releasing the driver from the drum while holding and rotating the drum with the same hand. At the same time hold tension on the cable with a spring hook from the left end of the machine. Do not position the cable around the front pulley (Figure 4) and take up all excess cable and then tighten the B/S drum. Hook the cable over the front pulley and check for proper adjustment of the transport pulley (Frame 117).
6. Connect C/R unlatching link.
7. Perform a functional check.

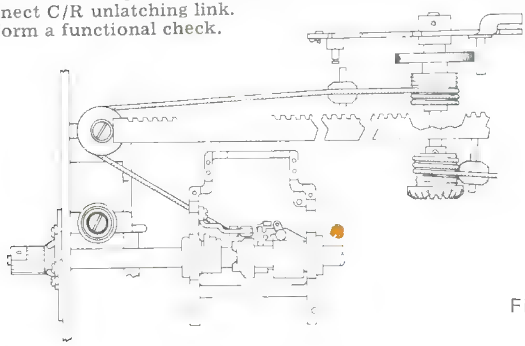


Figure 4

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
19 152	1279483	Conversion B/M — Also (Contains Ref. 149, 14, 17, 18, 22 6, 27, 28, 32, 41, 115, 26-55)		13.50
149	1205784	Trans. Pulley B/M	1	2.20
14	1164561	Escap. Shaft	1	.75
17	1124628	Pulley	1	.45
18	1128108	Tab Drum	1	1.20
22	1175579	Cord	1	.35
24 6	1205779	B/S Drum	1	4.15
27	1206990	Spring, Driver	1	.10
28	1204058	Stud, Driver	1	.09
32	1206908	Driver	1	1.80
41	1205783	Bracket Dual Transport Sys Correcting	1	1.85
115	151720	Setscrews	2	PP14
26 55	1290577	Bracket, Dual Pitch FTB	1	.65

Note: A B/M is now available. When using B/M, also order 1205777.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: 1 Hr.

Use Applicable Service Code

396 SERVICE INFORMATION

8-1-79

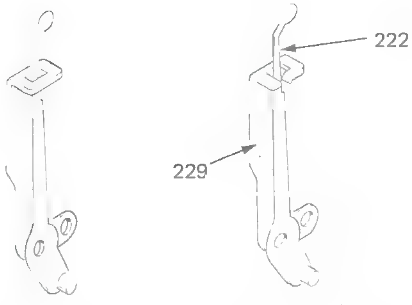
Model(s): 8XX

(Revised) 2-27-80

SUBJECT: Velocity Lever Asm.

For ease of plant assembly, an opening has been added to the upper portion of the velocity lever bracket.

On machines with the new level assemblies, parts can be replaced individually.



Old Level New Level Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
02 222	1206588	Velocity Lever (Selective Ribbon)	1	2.25
	1141757	Velocity Lever (Non-selective Ribbon)	1	2.30
229	1141758	Velocity Lever Bracket (Selective And Non-elective Ribbon)	1	.45

Parts Information: Old level assemblies will not be available when current stock is depleted. When replacing old level assemblies it is necessary to order both individual parts.

397 SERVICE INFORMATION

8-1-79

Model(s): 8XX

SUBJECT: Part Number/Price List (PN/PL) (F/N 241-5103-7) — Correction

OBSOLETE

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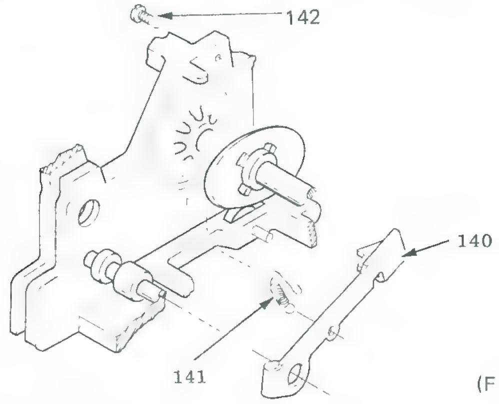
416 SERVICE INFORMATION

2-27-80

Model(s): 721, 8XX

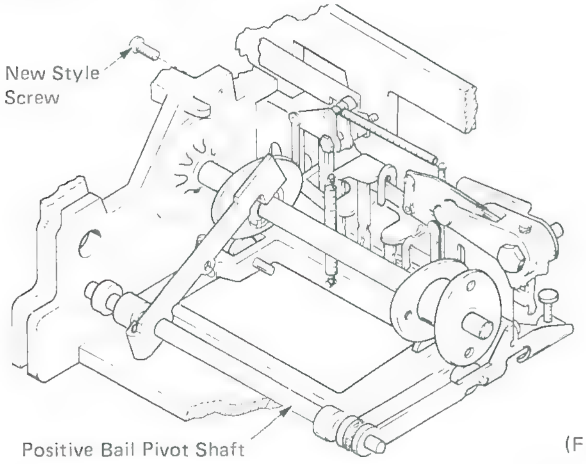
SUBJECT: Check Pawl, Spring, Stud And Tab Keylever — Redesigned

PURPOSE: The cycle clutch check pawl, stud and spring has been designed to improve cycle shaft cam stop location (Figure 1).



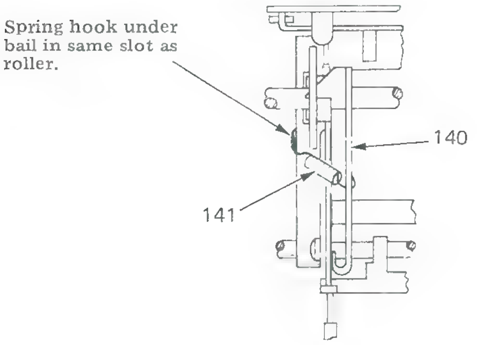
(Figure 1)

The new pawl (23-140) is now mounted on the positive bail pivot shaft (23-118). The screw (23-142) replaces the studs (23-417, 423). The studs (23-417), 423) will remain available for replacement on old level machines (Figure 2).



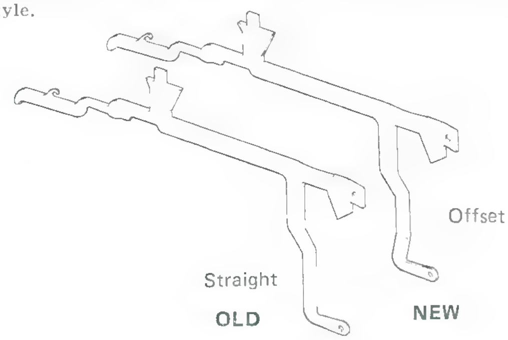
(Figure 2)

The pawl is spring loaded to the left by spring (23-141), and is connected to the positive bail as shown in Figure 3.



(Figure 3)

The tab keylever has been redesigned (Figure 4), to ensure there is no interference between the check pawl (23-140) and tab keylever. The new redesigned tab keylever will work on all level machines. The old level keylever will be obsoleted. Scrap all old level keylevers and reorder new style.

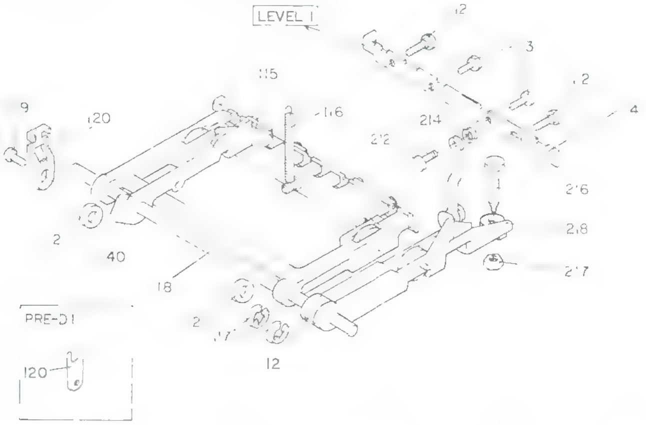


(Figure 4)

Removable Procedure For Check Pawl:

1. Remove the retainer screw (23-119) and retainer plate (23-120).
2. Remove the two "C"-clips (23-117) that retain the -5 latch bail (23-218).
3. Move the positive bail shaft (23-218) to the left far enough to remove the check pawl (23-).

Note: When replacing the shaft: (1) Ensure the felt pad (23-121) is between the two lugs of the -5 latch bail (23-218), (2) Make sure the notch on the right end of the shaft fits into the "D" shape window of the cycle clutch latch plate (21-218).



MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	140	1256655	Check Pawl	1	2.40
	141	1256658	Spring	1	.15
	142	1256659	Screw	1	.02
		1256683	Tab Keylever	1	†

MACHINES AFFECTED: Above S/N: 8X3 - 5170000; 8X 5 -- 6550000: 721 — 0860000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Old style check pawls, springs and studs will remain available for replacement in existing machines.

417 SERVICE INFORMATION

3-12-80

Model(s): 7XX, 8XX

SUBJECT: Cover Hinge — B/M

A bill of material is now available for 7XX (04-34) and 8XX (05-23) machines. The bill of material includes the top cover LH and RH hinge, plastic clamp and screws.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
04	34	1279487	Cover Hinge B/M (Contains Ref. 4, 32, 5)	1	†
05	23	1279486	Cover Hinge B/M (Contains Ref. 4, 5, 6, 49)	1	†

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418 SAFETY

3-12-80

Model(s): "Selectric"

SUBJECT: Motor Label

On Canadian-built 895 machines there is a possibility of the motor label adhesive failing. The label could curl up and be near or touching the tab rack, reducing the effectiveness of the protective insulation system. If this condition exists, remove the label. It is not necessary to replace the label.

SAFETY PRECAUTION:

NOTE: Removal of the label may cause the motor to shift position. Recheck motor position.

MACHINES AFFECTED: S/N between approx. 4514800 — 4864161.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

419 SERVICE INFORMATION

3-12-80

Model(s): "Selectric"

SUBJECT: Top Cover Latch — Shock Mounts

SYMPTOM: Top cover vibrates and cannot be satisfactorily adjusted to eliminate the problem.

SOLUTION: Install the top cover latch shock mounts (05-82) (Figure 1).

Adjust the latches so that the shock mounts are completely compressed.

Note: This is done to ensure that the customer will not have difficulty in lifting the top cover.

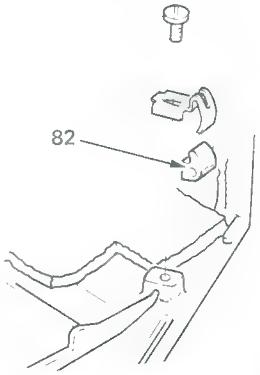


Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
05 82	6519448	Shock Mount, Top Cover	2	.02

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Applicable Service Code

420 RELIABILITY

3-12-80

Model(s): 8XX

SUBJECT: Bellringer Bellcrank — Redesigned

The paddle portion of the bellringer bellcrank (10-8) has been lengthened and an extension added to prevent it from slipping over top of the linelock bail (09-80).

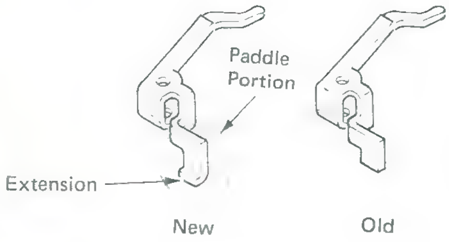


Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
10 8	1256662	Bellringer Bellcrank	1	†

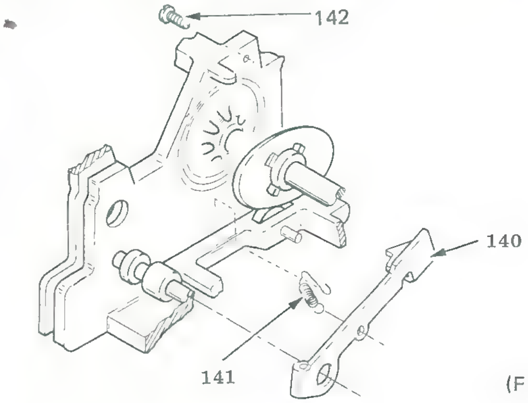
416 SERVICE INFORMATION

2-27-80

Model(s): 721, 8XX

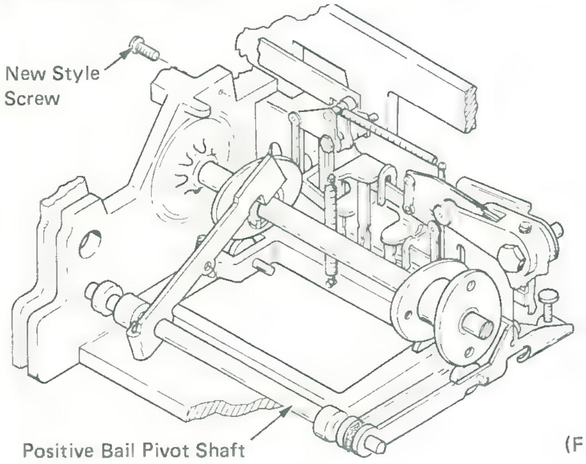
SUBJECT: Check Pawl, Spring, Stud And Tab Keylever – Redesigned

PURPOSE: The cycle clutch check pawl, stud and spring has been designed to improve cycle shaft cam stop location (Figure 1).



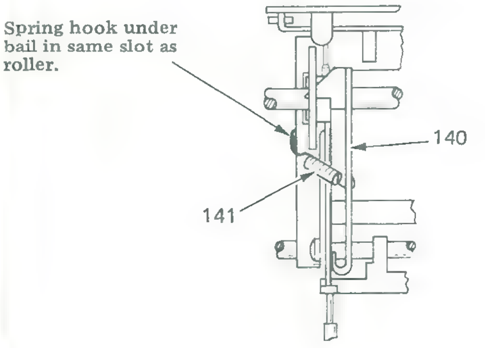
(Figure 1)

The new pawl (23-140) is now mounted on the positive bail pivot shaft (23-118). The screw (23-142) replaces the studs (23-417, 423). The studs (23-417), 423) will remain available for replacement on old level machines (Figure 2).



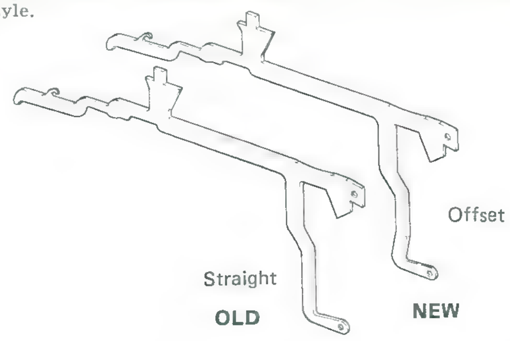
(Figure 2)

The pawl is spring loaded to the left by spring (23-141), and is connected to the positive bail as shown in Figure 3.



(Figure 3)

The tab keylever has been redesigned (Figure 4), to ensure there is no interference between the check pawl (23-140) and tab keylever. The new redesigned tab keylever will work on all level machines. The old level keylever will be obsoleted. Scrap all old level keylevers and reorder new style.

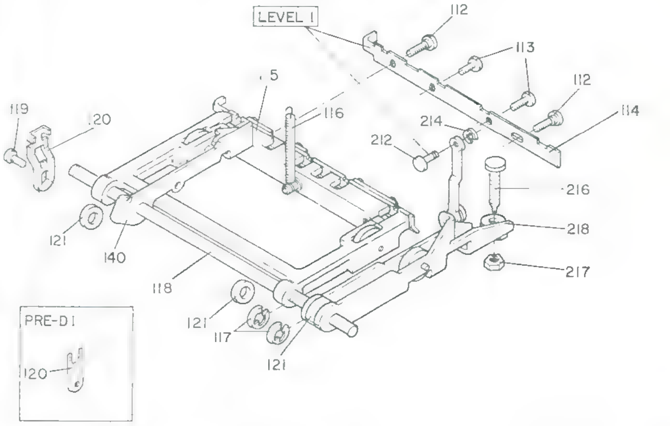


(Figure 4)

Removable Procedure For Check Pawl:

1. Remove the retainer screw (23-119) and retainer plate (23-120).
2. Remove the two "C"-clips (23-117) that retain the -5 latch bail (23-218).
3. Move the positive bail shaft (23-218) to the left far enough to remove the check pawl (23-).

Note: When replacing the shaft: (1) Ensure the felt pad (23-121) is between the two lugs of the -5 latch bail (23-218), (2) Make sure the notch on the right end of the shaft fits into the "D" shape window of the cycle clutch latch plate (21-218).



MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	140	1256655	Check Pawl	1	2.40
	141	1256658	Spring	1	.15
	142	1256659	Screw	1	.02
		1256683	Tab Keylever	1	†

MACHINES AFFECTED: Above S/N: 8X3 — 5170000; 8X 5 — 6550000; 721 — 0860000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Old style check pawls, springs and studs will remain available for replacement in existing machines.

TIMELY INFORMATION PROGRAM

1-30-80

Model(s): Correcting Selectric

SUBJECT: Right-Hand Dust Cover Retainer Clip

Check the right-hand dust cover retainer (16-31) for interference with the correcting actuating link (26-086).

Form the bracket to ensure reliable operation of the correcting mechanism. This condition should be checked with the dust cover installed, because the cover will push the bracket toward the front of the machine.

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CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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382 SERVICE INFORMATION

2-28-79

Model(s): 7XX, 8XX

(Revised) 3-12-80

SUBJECT: Repeat Row Four Keylever — Plant Installed

The row four repeat keylever (21-108) (Figure 1) has been redesigned for greater reliability and ease of installation. It is now available for **PLANT INSTALLATION** on new machines through Special Engineering Request (SER). An SER must be submitted at the time the new machine is ordered. Plant installation is the recommended procedure.

Replacement parts are now available.

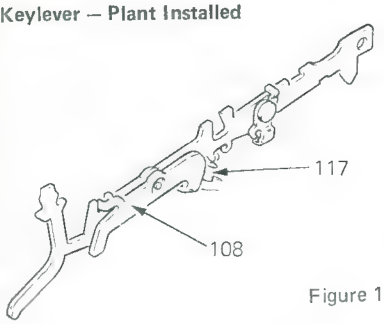

Figure 1

Note: The customer **MUST** be advised of the possibility of the last character being a dash.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
21	108	1279468	Keylever, Repeat Row 1	1	1.90
	117	1254963	Spring	1	.03

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .4 Hr.

Use Applicable Service Code

383 RELIABILITY

2-28-79

Model(s): 721

SUBJECT: Escapement Racks — Soft

SYMPTOM: Failures caused by premature wear of 721 escapement rack (6-27) may appear in:

1. Backspace
2. Escapement (skipping)
3. Overbank (uneven margin)
4. Tab (uneven columns and/or button hard to depress)

SOLUTION: Replace rack.

MACHINES AFFECTED: 12 pitch S/N: 0808000 — 0817000, 10 pitch S/N: 0784000 — 0817000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: No soft racks are in field stock.

Estimated Installation Time: .5 Hr.

Use Service Code 32

This CEM Expires 3-1-80

384 SERVICE INFORMATION

2-28-79

Model(s): 8XX

(Revised) 5-9-79

SUBJECT: Pointers, "Selectric" II — Redesigned

Pointers (09-136) (10-37) for the "Selectric" II have been redesigned (Figure 1). The universal pointers are narrower and can be used on either dual or single pitch. Teeth have been added to the bottom to reduce chances of the pointer coming out of its holder. The new pointers are compatible with current pointer holders (09-140) (10-41).

The current part number for dual pitch pointers will be used for the new universal pointers. Existing stock of level 1 pointers will be used until depleted. Orders for level one pointers will be substituted to the level two universal pointers when parts become available.

Note: Pointers for machines with factory sound are not affected by this change.

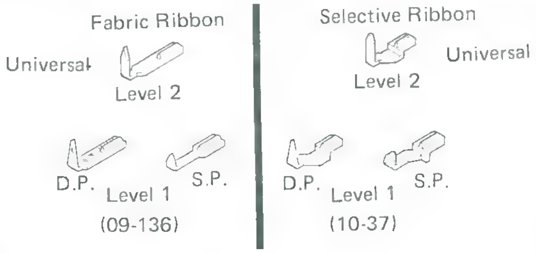

Figure 1

385 SERVICE INFORMATION

2-28-79

Model(s): All "Selectrics"

SUBJECT: Detent Actuating Lever Support Screw — Redesigned

The detent actuating lever screw (02-525) has been redesigned. The shouldered nut (02-522) has been replaced with a "C"-clip (02-432) (Figure 1). The new level screw is compatible with all carriers.

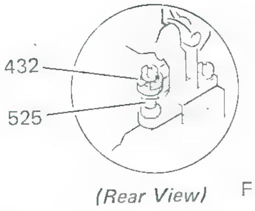

Figure 1

Loosen the locking nut (02-526) and adjust screws (02-525) with screwdriver.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	432	1092125	"C"-Clip	1	PP3
	525	1256453	Screw, Support	1	*

386 RELIABILITY

2-28-79

Model(s): Correcting "Selectric" 8X5

SUBJECT: Correcting Mechanism Front Carrier Support And Torque Bar Asm. Changed From Plastic To Metal

SYMPTOM: Correcting failures on machines with the molded plastic carrier support and torque bar (26-130).

SOLUTION: Replace with the metal asm.

The adjustments for the metal support and torque bar can be located in the APM.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
26	130	1290607	Support Asm.	1	5.15

MACHINES AFFECTED: All correcting "Selectrics" with the plastic carrier support (between S/N: 3795000—6170000).

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: The plastic support and torque bar are no longer available. There is a low availability of parts; order parts on as needed basis.

Use Service Code 32

This CEM Expires 1-31-80

387 RELIABILITY

2-28-79

Model(s): Correcting "Selectric"

(Revised) 5-9-79

SUBJECT: Margin Bellcrank

PURPOSE: To stop unwanted correcting tape feed when typing through right hand margin.

SYMPTOM: As the carrier moves past the right hand margin, the bellringer bellcrank (10-8) may contact the inhibitor actuator bellcrank (26-126) when the margin release is activated. This can cause the correcting tape to feed a few spaces.

(Continued)

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(CEM 387 Continued)

SOLUTION: Remove (stone, file, or grind) approximately .050" (1.27 mm) of the bellcrank in the area shown (Figure 1) to provide minimal clearance between the bellringer bellcrank (09-106), (10-8) and the inhibitor actuator bellcrank (26-126). (The tip of the bellringer bellcrank should be kept round when removing material.) After making this change check adjustment of the linelock bracket (09-5), and the linelock bail finger (09-80). Redesigned parts will be available at a later date to eliminate need for this procedure.

Note: The bellcrank is a hardened part and forming is NOT RECOMMENDED.

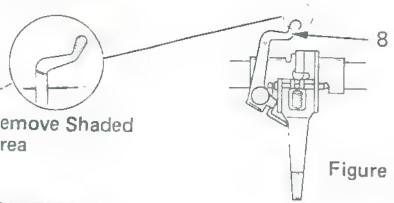


Figure 1

388

SERVICE INFORMATION

3-14-79

Model(s): 7XX, 8XX

SUBJECT: Motors

All "Selectric" motors will be shipped without motor mounts and without the tape on the bottom after depletion of current stock. When ordering a motor also order the correct level motor mounts. The tape is no longer required.

389

SERVICE INFORMATION

3-14-79

(Revised) 5-9-79

Model(s): 8XX

SUBJECT: Machine Idle Noise

SYMPTOM: Excessive cover vibration and motor noise.

SOLUTION: If experiencing excessive machine noise, the rubber shipping bumper (11-511) located on the front of the left mounting bracket could possibly contribute to the problem. There should be a clearance between the bumper and the motor. If there is no clearance, reposition the motor and/or remove the bumper (Figure 1). Refer to Combined Service Information, page 23, item 1, for further information on idle noise.

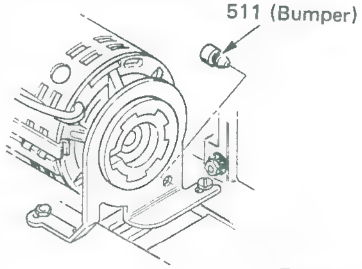


Figure 1

Note: A method of removing the bumper is to cut the external tip off and push the other end out with a screwdriver.

390

SERVICE INFORMATION

5-9-79

Model(s): 7XX, 8XX

SUBJECT: Pinfeed Platen — "D" Shaped Pins

PURPOSE: The diameter of the pins (49-101) has been increased from .140" to .162" (3.56 to 4.11 mm) and are now "D" shaped (Figure 1). This will make the pin size agree with paper industry standards and maintain compatability with previous level platen core lengths.

SYMPTOM: Print quality (i.e., tails or smearing) and/or alignment not consistent.

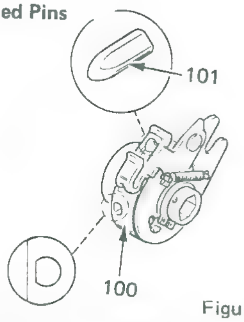


Figure 1

SOLUTION: Replace both pin wheel assemblies (49-130). The part numbers for the new assemblies remain the same as the standard pin wheel assemblies.

Note: High lift pin wheel assemblies and previous level standard pin wheels will no longer be available. If replacement of old level pin wheels or parts (high lift or standard) is necessary, both sides should be replaced with the "D" shaped pin wheels.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
49	100	1256158	Pin Wheel Hub R.H.	1	5.50
		1256159	Pin Wheel Hub L.H.	1	5.50
	101	1256157	Pin, "D" Shaped	9	.08
	130	1203781	Pin Wheel Asm. R.H.	1	16.50
		1203782	Pin Wheel Asm. L.H.	1	16.50

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Applicable Service Code

391

SERVICE INFORMATION

5-9-79

Model(s): 8XX — With Rotary Backspace

SUBJECT: Uneven Left Margin

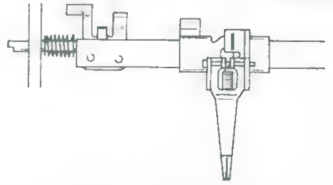
PURPOSE: Checks and adjustments to help resolve difficult overbank problems when margin, carrier return, and escapement adjustments appear correct.

SYMPTOM: Uneven left margin.

SOLUTION: If failure occurs at ANY position of the left margin stop, follow procedures in section A. If the failure occurs only between 0 and 30 on the margin scale, follow procedure in section B.

Note: The symptoms and solutions listed are the most common, but each problem is unique and may require use of section A and/or B.

A. 1. APM frames 150 through 161 should be adjusted to specifications, note the following:
   a. Frame 151 — Adj. for min. pawl clearance. PAWL MUST NOT DRAG while returning.
   b. Frame 156 — Check the overbank guide adjustment while biasing the tip of the LH margin set lever in a counterclockwise direction. This simulates the dynamic forces present during a machine powered carrier return. Ensure the switch pitch gear (DP) (10-29) or collar (single pitch) does not interfere with this adjustment.



   c. Frame 160 — Adjust the torque limiter to low side of spec for minimum return force with positive drive.

2. APM frames 333 through 343 should be adjusted to specifications, note the following:
   a. Frame 336 — Make this adjustment while holding rail to right and remove play in rack to left.

B. Adjust the escapement mechanism as outlined in CEM No. 334, with the following additional checks and adjustments.

1. The escapement rack bracket (DP machines) (07-20) must be positioned to prevent bowing of the escapement rack.

   Loosen switch pitch selector gear (APM frame 90) to relieve pressure on the escapement rack gear. Loosen bracket (7-20) and allow escapement rack to assume natural rest position. Tighten bracket (7-20) without disturbing escapement rack rest position. Readjust APM, frame 90.

2. Check the escapement and margin racks as described in CEM No. 374.

Note: The carrier buffer (CEM No. 320) may be installed to increase carrier stability on marginally reliable machines. This is not recommended as a substitute for replacement of worn parts in the print sleeve/shaft area. Parts should be replaced if worn and the buffer used only on machines that appear unreliable after the above steps were taken.

392

SERVICE INFORMATION

5-9-79

Model(s): 8XX Single Pitch (Non-Rotary Backspace Machines)

SUBJECT: Carrier Return Latch — Redesigned

PURPOSE: Two additional holes have been added to the carrier return latch (03-207). One is an additional hole for the carrier return unlatching link (03-202) and the other is a hole to anchor the latch spring (03-205) (Figure 1).

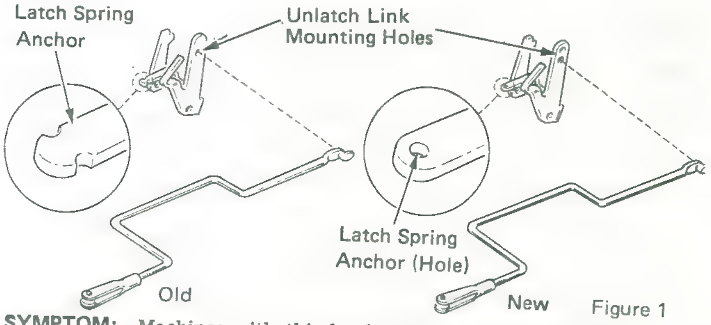


Figure 1

SYMPTOM: Machines with this level carrier return mechanism were produced with one hole for the carrier return unlatching link (03-202) and may not provide enough motion to reliably unlatch the carrier when adjustments appear correct. The latch spring (03-205) anchor lug could allow the spring to slide up the lug.

SOLUTION: Replace the latch (03-207) and reconnect the unlatching link (03-202) in the lower hole and attach the latch spring to the hole in the anchor lug. The part number and adjustments remain the same.

Parts Information: Part number remains the same.

427

SERVICE INFORMATION

6-18-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Stroke Counters – SER Only

New install stroke counter B/Ms are available **only** by submitting an SER with DCO attached. All necessary parts and installation instructions will be included in the SER. Replacement parts for existing counters will remain available. Installation instructions and hardware for the stroke counter on machines with new style check pawl are included.

428

SERVICE INFORMATION

7-2-80
(Revised) 12-17-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Carrier Return – Uneven/Slow/Intermittent

SYMPTOM: Uneven or slow carrier return can be caused by failure of the carrier return shoe (03-502) to **fully engage** each of the last 2 to 3 coils on the right side of the pinion spring (25-13) (Figure 1).

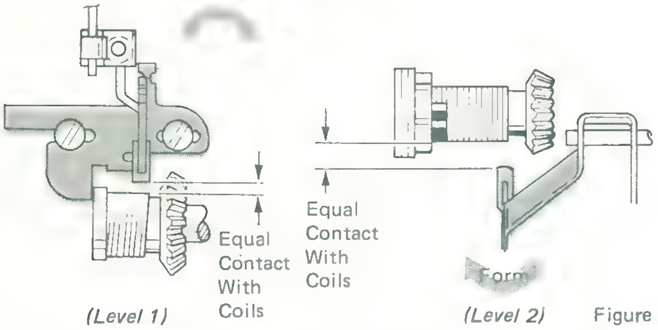


Figure 1

If the shoe is tilted to either side, so that greater pressure is applied to a single spring coil, increased wear will result on both the spring and on the return pinion (25-14) at that point. This leads to rapid loss of adjustment and need for aparts replacement more often. It is important that the shoe NOT apply greater pressure to the inside coils as this prevents the remaining outside coils from driving.

SOLUTION: If experiencing this problem, or when replacing parts in this area, check to ensure that the return shoe engages the coils of the return pinion spring evenly. When making the shoe overlap adjustment, be sure the shoe is not tilted and that shoe overlap does not exceed 3 coils. Best results will be achieved with 2 to 2 1/2 coil overlap.

429

RELIABILITY

7-2-80
(Revised) 12-17-80

Type(s): 6126

SUBJECT: Weak Cycle Clutch Drive/Contaminated Lubricant

PURPOSE: On some Correcting "Selectric" II Model 895s the cycle clutch lubricant may have metal contamination.

SYMPTOM: The contamination wears both the cycle clutch spring and cycle clutch pulley arbor, causing the clutch to slip.

SOLUTION: If experiencing weak cycle clutch drive and normal adjustments are not effective, do the following procedure:

1. Remove cycle shaft assembly and disassemble cycle clutch.
2. Thoroughly remove **all traces** of lubricant from cycle shaft assembly and cycle clutch pulley hub.
3. Install new cycle clutch spring, lubricate, and adjust.

Note: This procedure is effective in most cases. Do not replace the cycle clutch pulley hub unless these steps fail to correct the problem.

MACHINES AFFECTED: Between approx. S/N: Type 6126 (Model 895) – 4765000 to 4874000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .5 Hr.

Use Service Code 33

This CEM Expires 6-1-81

430

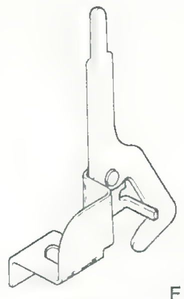
SERVICE INFORMATION

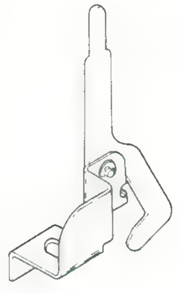
7-2-80

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

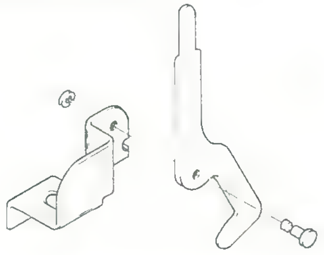
SUBJECT: Center Cover Bracket – Redesigned

The center cover latch bracket (05-43, 05-18) has been redesigned so that the latch lever (05-44, 05-16) can be installed to the inside of the bracket (Figure 1). This change gives more clearance between the lever and the foam, and makes it easier to unlatch the covers.


New Level
Figure 1


Old Level
Figure 2

Until the new bracket is available, manufacturing is using the old level parts (Figure 2) and reversing the lever (Figure 3). This method can also be used in the field if desired.


Modified Old Level
Figure 3

431

SERVICE INFORMATION

7-2-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Multiplying Lever Mounting Stud B/M

The multiplying lever is not included in B/M 25-324. This lever can be ordered under 25-250. Mark this reference number in your APM (25-250) and add the reference number and P/N to your PN/PL.

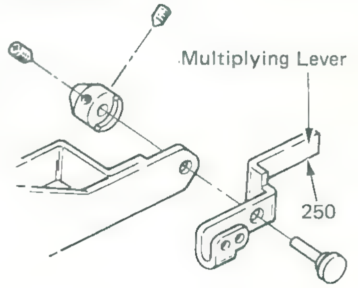


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	250	1128016	Multiplying Lever	1	.10

432

SERVICE INFORMATION

7-2-80

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: PN/PL Correction

The fan (11-400) (sound reduction machines only) should be P/N 1205958. Mark this change in your PN/PL.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
11	400	1205958	Fan, Sound Reduction Machines Only	1	1.40

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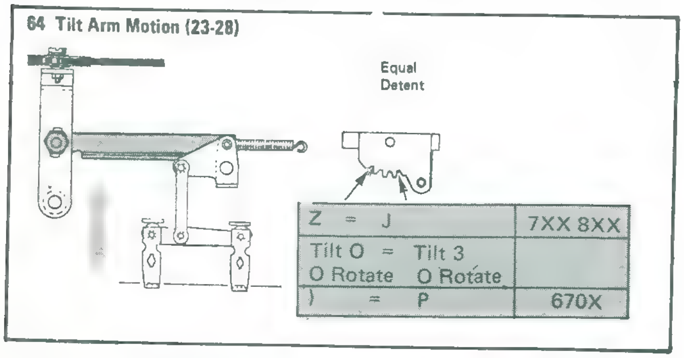
433 SERVICE INFORMATION

7-30-80

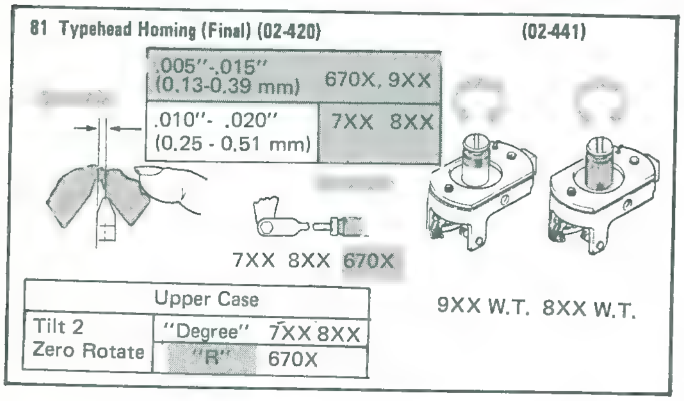
Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: APM (F/N 241-5939) Correction

The shaded areas in the frames (64 and 81) below are corrections that should be marked in your APM.



Z = J	7XX 8XX
Tilt O = Tilt 3 O Rotate O Rotate	
) = P	670X



.005"-.015" (0.13-0.39 mm)	670X, 9XX
.010"- .020" (0.25 - 0.51 mm)	7XX 8XX

Upper Case		
Tilt 2 Zero Rotate	"Degree"	7XX 8XX
	"R"	670X

434 SERVICE INFORMATION

9-10-80
(Revised) 3-25-81

Type(s): 6121 (Model 7X3), 6126 (Model 8X3), 6701, 6702, 6704

SUBJECT: Operational Shaft Support (Lost Index Motion)

PURPOSE: To reduce operational shaft flex, and improve reliability of the index mechanism on applications such as continuous multiple copy forms, pin feed, and 45/48 tooth OCR.

SOLUTION: Install the operational shaft support B/M using the following method:

1. Attach the drilling templete (Figure 1A) to the machine frame as shown in Figure 1B. Drill the two holes with a No. 22 drill bit (P/N 450265) and remove template.

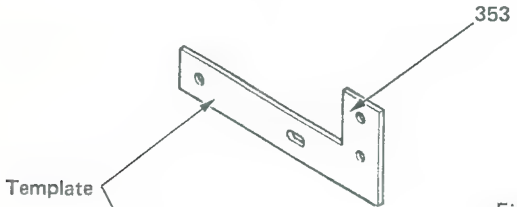
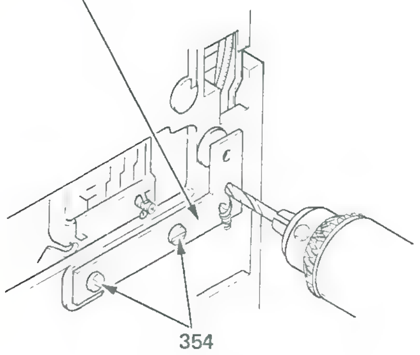


Figure 1A



Bottom View

Figure 1B

2. Assemble and install the operational shaft support bracket asm. as shown below (Figures 2A and B).

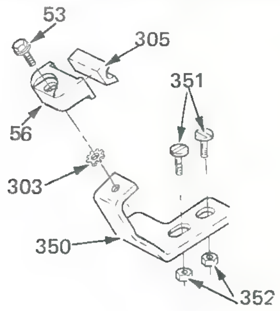


Figure 2A

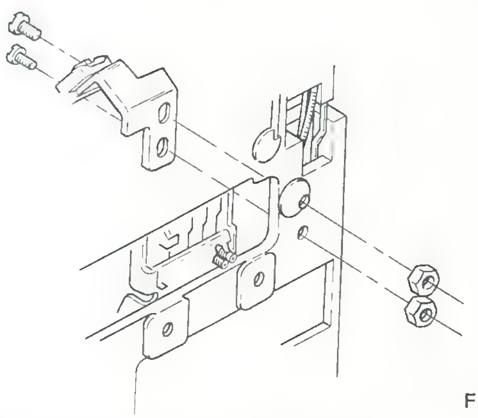


Figure 2B

3. Position the operational support bracket front-to-rear so the front of the bracket evenly contacts the power frame as shown in APM, frame 134.
4. Perform adjustment APM, frame 135.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	355	1279493	Operational Shaft Support B/M (Includes 25-356, 353 and 354)	1	6.75
	356	1279494	Operational Shaft Support B/M (Includes 25-53, 56, 303, 305, 350, 351, 352)	1	4.85
	53	1128326	Screw — Support Mounting	1	.03
	56	1159843	Bearing Support	1	.55
	303	56722	Lock Washer — Support Mounting	1	PP08
	305	1287910	Operational Shaft Support Bearing	1	.35
	350	1279492	Operational Shaft Support Bracket	1	3.70
	351	35739	Screw — Support Bracket Mounting	2	.08
	352	257187	Nut — Support Bracket Mounting	2	PP13
	353	1279491	Drilling Template	1	1.75
	354	438566	Screws, Template Mounting	2	PP15

NOTE: Order reference 353 as necessary.

Use Applicable Service Code.

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26] 670X [27]

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A complete set of current "Selectric" Typewriter CEM materials consists of "Selectric" Combined Service Information booklet (F/N 241-5114-2) dated May, 1980, CEMs starting on page one (reissued 5-7-80) and the Technical Information Index found in the back of the Part Number/Price List (F/N 241-5103).

349 SAFETY

8-24-77

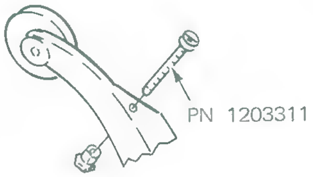
Model(s): 725

SUBJECT: Shift Adjusting Screw.

SAFETY LOCATION: Some reconditioned 725 "Selectric" machines have reached the field with a bristol head lower case adjusting screw in the shift arm. This bristol could cause hand injury when using the hand cycle wheel.

SAFETY PRECAUTION: Check lower case shift adjusting screw on next service call.

SAFETY CORRECTIVE ACTION: Replace bristol-type adjusting screw with fillister head screw (P/N 1203311).



Note: This change applies only to reconditioned 725's that were converted from Selectric I/O's. Part references are shown in the MT/ST—I/O APM (16-49, P/N 1203311).

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .2

Use Service Code 32

This CEM Expires 7-1-80

377 SERVICE INFORMATION

11-29-78

Model(s): 7XX, 8XX

(Revised) 1-30-80

SUBJECT: Platen Knobs

Level 2 platen knobs (12-55) are now being manufactured with the setscrews in line to reduce possibility of knob loosening.

Levels 1 and 2 platen knobs (12-55) can be used on any left-hand platen shaft.

Level 1 platen knobs can be used on all right-hand platen shafts providing one screw is contacting the flat surface of Levels 2 and 3 shafts (Figure 1).

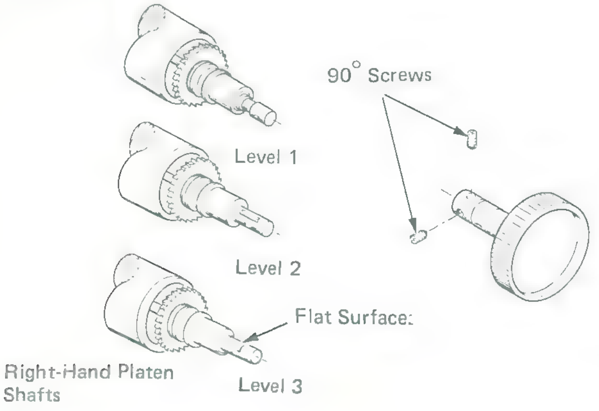


Figure 1

Level 2 platen knobs (12-55), in-line screws, can only be used on Levels 2 and 3 right-hand platen shafts (Figure 2).

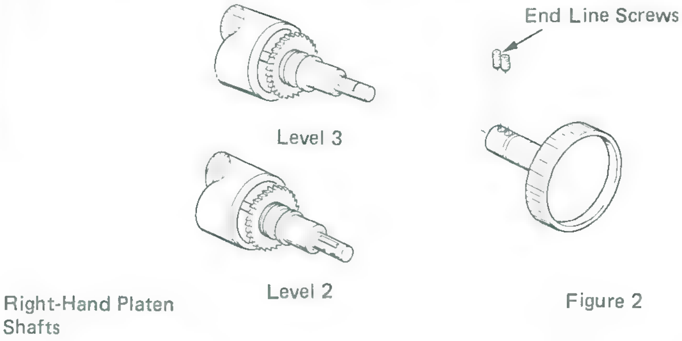


Figure 2

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
12 55	1205427	Knob (In-Line Screws), Level 2	1	1.40
55	1256532	Knob, 90 Degree Screws, Level 1	1	1.40

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

382 SERVICE INFORMATION

2-28-79

Model(s): 7XX, 8XX

(Revised) 3-12-80

SUBJECT: Repeat Row Four Keylever – Plant Installed

The row four repeat keylever (21-108) (Figure 1) has been redesigned for greater reliability and ease of installation. It is now available for **PLANT INSTALLATION** on new machines through Special Engineering Request (SER). An SER must be submitted at the time the new machine is ordered. Plant installation is the recommended procedure.

Replacement parts are now available.

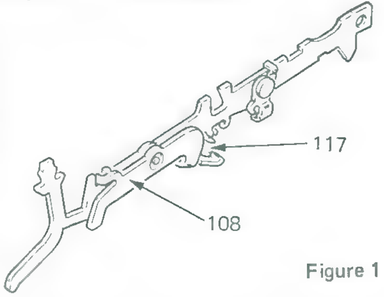


Figure 1

Note: The customer **MUST** be advised of the possibility of the last character being a dash.

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
21 108	1279468	Keylever, Repeat Row 1	1	1.90
117	1254963	Spring	1	.03

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .4 Hr.

Use Applicable Service Code

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396

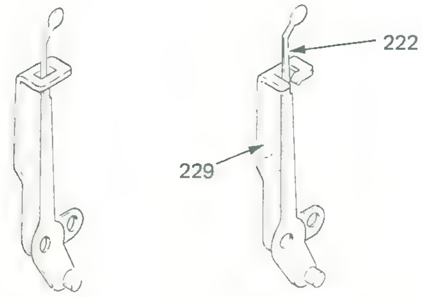
SERVICE INFORMATION 8-1-79

Model(s): 8XX (Revised) 2-27-80

SUBJECT: Velocity Lever Asm.

For ease of plant assembly, an opening has been added to the upper portion of the velocity lever bracket.

On machines with the new level assemblies, parts can be replaced individually.



Old Level New Level

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	222	1206588	Velocity Lever (Selective Ribbon)	1	2.25
		1141757	Velocity Lever (Non-selective Ribbon)	1	2.30
	229	1141758	Velocity Lever Bracket (Selective And Non-elective Ribbon)	1	.45

Parts Information: Old level assemblies will not be available when current stock is depleted. When replacing old level assemblies it is necessary to order both individual parts.

399

RELIABILITY 9-26-79

Model(s): 8XX (Revised) 6-18-80

SUBJECT: Left-Hand Ribbon Lift Guide – Level 1

OBSOLETE.

Note: Left-hand ribbon lift guides for Level 1 machines are now available (15-2). Part No. 1206534 is obsolete.

401

SERVICE INFORMATION 10-10-79

Model(s): "Selectric" II Correcting (Revised) 11-7-79

SUBJECT: Correcting Tape Feed B/M

OBSOLETE: Parts Not Available At This Time

405

RELIABILITY 11-7-79

Model(s): 7XX, 8XX

SUBJECT: Motor Pulley And Pawls – Defective

SYMPTOM: Machine locks up or will not start due to failure of motor pawls to disengage from the motor pulley.

SOLUTION: Check for a minimum clearance of .005" (0.13 mm) between the motor pawls and the steps of the pulley. If this clearance does not exist, replace the motor pawls (11-43) and motor pulley (11-48).

Note: This applies to the one-piece pawl assembly only.

MACHINES AFFECTED: Between approx. S/N: 7X1 — 0797028-0853313, 8X3 — 5023017-5126951, 8X5 — 6068040-6388812.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32

This CEM Expires 9-1-80

407

SAFETY 11-7-79

Model(s): All "Selectric" Typewriters

SUBJECT: Heat Buildup

SAFETY LOCATION: The motor vent grill.

SAFETY PRECAUTION: If the vent is blocked and the machine is left on, the parts can become hot enough to cause possible injury.

SAFETY CORRECTIVE ACTION: If the vent is blocked, remove the blockage. Advise the customer to maintain proper clearance to ensure air flow.

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26] 670X [27]

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409 SERVICE INFORMATION

1-30-80

Model(s): 7XX, 8XX, 670X

(Revised) 6-18-80

SUBJECT: Paper Bail Arm Spring

Several different levels of paper bail arm springs (22-33, 26-209) have been used in production of "Selectric" Typewriters. Each level provides a slightly different amount of spring tension. The current production paper bail arm spring, P/N 1206821, obsoletes all previous levels and may be used on any level "Selectric" Typewriter. Machines above approximate S/N:— 7X1 — 0808048, 8X3 — 5044864, 8X5 — 6133326, Canada 8X5 — 4844000, and 670X — All, have this spring installed.

The paper bail arm springs in Parts Packet No. 5 are not current level. Scrap all paper bail arm springs in Parts Packet No. 5. Order replacement quantities 22-33 or 26-209.

Paper bail arm springs have been deleted from Parts Packet No. 5.

When paper bail spring replacement is required on machines below the serial number range listed above, both springs should be replaced. The universal paper bail Bill of Material (22-219 and 26-104) includes the correct level springs.

410 RELIABILITY

1-30-80

Model(s): Selectric

SUBJECT: Ribbon Lift Arm — Stripped Screw

PURPOSE: If the mounting screw hole for the ribbon lift arm (15-25) is stripped, an additional nut (15-5) can be added to the inside of the carrier to retain the screw (15-6).

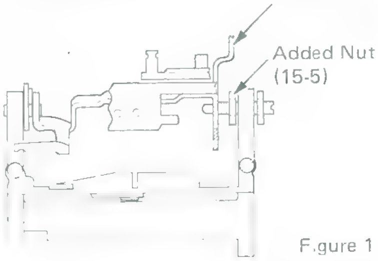

Figure 1

411 SERVICE INFORMATION

1-30-80

Model(s): Dual Pitch 8XX

SUBJECT: Margin Rack Gear

A limited number of machines will be shipped to the field with 6-32 screws (P/N 1175107 parts package 01), instead of the standard 4-40 screw (P/N 1175102). Margin rack gears will be black and the screws will require using a number 6 fluted wrench.

413 RELIABILITY

2-13-80

Model(s): Correcting Selectric

SUBJECT: Correction Tape — Intermittent Feed Failures

Intermittent correction tape feed failures and/or incomplete lift off may be caused by a defective pawl feed mounting screw (26-5). The screw is undersize in the area where the washer (26-7) is mounted (Figure 1). This allows the washer to be off center and partially cover the teeth on the spiked take-up ratchet (Figure 2).

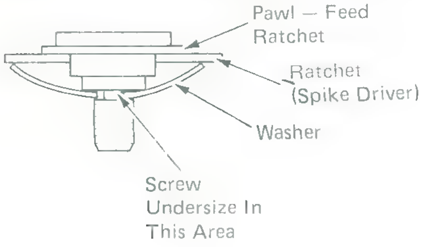

Figure 1

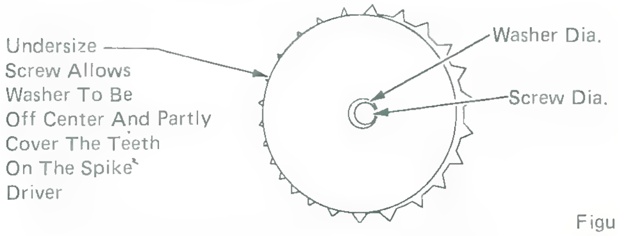
Undersize Screw Allows Washer To Be Off Center And Partly Cover The Teeth On The Spike Driver
Washer Dia.
Screw Dia.

Figure 2

When experiencing this problem, replace the screw (26-5).

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
26	5	1290653	Screw	1	.15

MACHINES AFFECTED: 8X3 — 5147714 — 5181900; 8X5 — 6462050 — 6557510.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Service Code 32

This CEM Expires 12-1-80

415 RELIABILITY

2-27-80

Model(s): "Selectric" II And Correcting

SUBJECT: Escapement Bracket — Washer/Clip Added

A limited number of machines were manufactured with a "C"-clip or washer between the screw (19-7) and the tab lever (Figure 1).

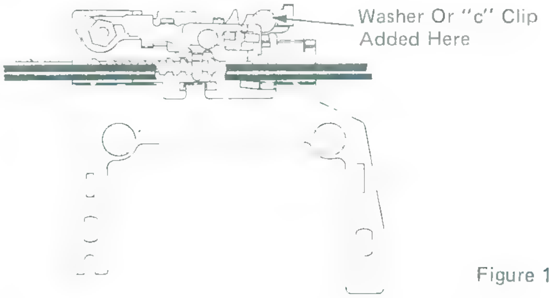

Figure 1

The washer or "C"-clip will prevent the tab lever from falling under the extension of the escapement bracket (Figure 2).

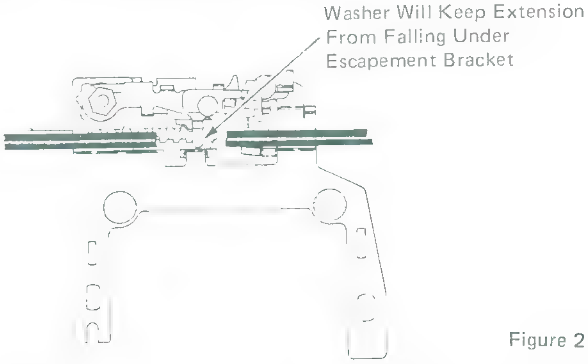
Washer Will Keep Extension From Falling Under Escapement Bracket

Figure 2

If experiencing a binding tab lever and the washer has been added, and normal adjustments do not correct the problem, replace the escapement bracket.

MACHINES AFFECTED: Approx. S/N: 8X5 — 6513000-6545800: 8X3 — 5155558-5188352.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: 2.0 Hrs.

Use Service Code 32

This CEM Expires 1/15/81

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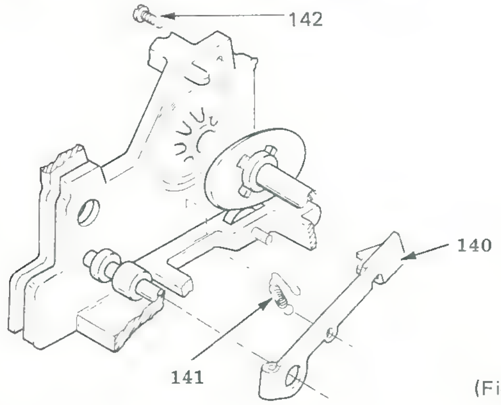
416 SERVICE INFORMATION

2-27-80

Model(s): 721, 8XX.

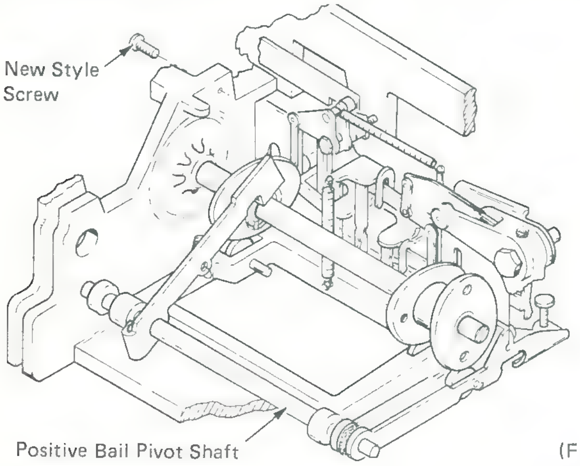
SUBJECT: Check Pawl, Spring, Stud And Tab Keylever – Redesigned

PURPOSE: The cycle clutch check pawl, stud and spring has been designed to improve cycle shaft cam stop location (Figure 1).



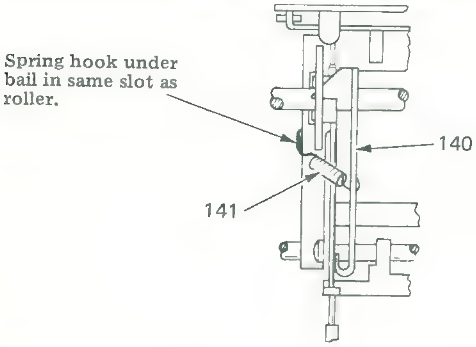
(Figure 1)

The new pawl (23-140) is now mounted on the positive bail pivot shaft (23-118). The screw (23-142) replaces the studs (23-417, 423). The studs (23-417), 423) will remain available for replacement on old level machines (Figure 2).



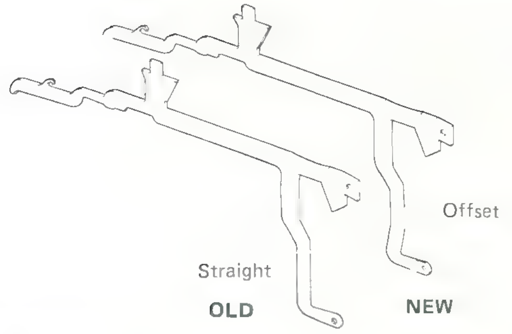
(Figure 2)

The pawl is spring loaded to the left by spring (23-141), and is connected to the positive bail as shown in Figure 3.



(Figure 3)

The tab keylever has been redesigned (Figure 4), to ensure there is no interference between the check pawl (23-140) and tab keylever. The new redesigned tab keylever will work on all level machines. The old level keylever will be obsoleted. Scrap all old level keylevers and reorder new style.

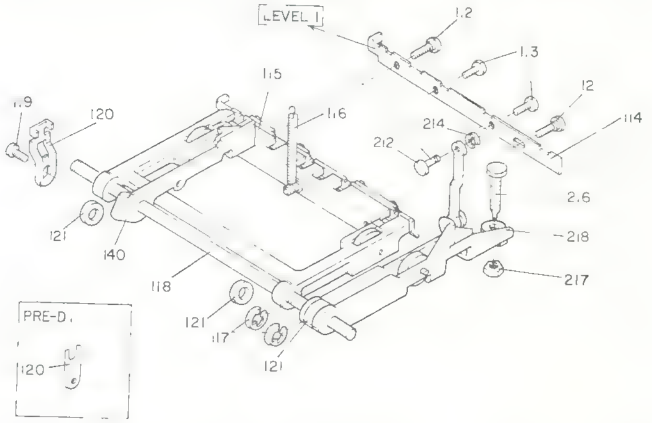


(Figure 4)

Removable Procedure For Check Pawl:

1. Remove the retainer screw (23-119) and retainer plate (23-120).
2. Remove the two "C"-clips (23-117) that retain the -5 latch bail (23-218).
3. Move the positive bail shaft (23-218) to the left far enough to remove the check pawl (23-).

Note: When replacing the shaft: (1) Ensure the felt pad (23-121) is between the two lugs of the -5 latch bail (23-218), (2) Make sure the notch on the right end of the shaft fits into the "D" shape window of the cycle clutch latch plate (21-218).



MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	140	1256655	Check Pawl	1	2.40
	141	1256658	Spring	1	.15
	142	1256659	Screw	1	.02
		1256683	Tab Keylever	1	†

MACHINES AFFECTED: Above S/N: 8X3 -- 5170000; 8X 5 – 6550000; 721 — 0860000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Old style check pawls, springs and studs will remain available for replacement in existing machines.

417 SERVICE INFORMATION

3-12-80

Model(s): 7XX, 8XX

SUBJECT: Cover Hinge – B/M

A bill of material is now available for 7XX (04-34) and 8XX (05-23) machines. The bill of material includes the top cover LH and RH hinge, plastic clamp and screws.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
04	34	1279487	Cover Hinge B/M (Contains Ref. 4, 32, 5)	1	†
05	23	1279486	Cover Hinge B/M (Contains Ref. 4, 5, 6, 49)	1	†

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26] 670X [27]

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418 SAFETY

3-12-80

Model(s): "Selectric"

SUBJECT: Motor Label

On Canadian-built 895 machines there is a possibility of the motor label adhesive failing. The label could curl up and be near or touching the tab rack, reducing the effectiveness of the protective insulation system. If this condition exists, remove the label. It is not necessary to replace the label.

SAFETY PRECAUTION:

NOTE: Removal of the label may cause the motor to shift position. Recheck motor position.

MACHINES AFFECTED: S/N between approx. 4514800 — 4864161.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

419 SERVICE INFORMATION

3-12-80

Model(s): "Selectric"

SUBJECT: Top Cover Latch — Shock Mounts

SYMPTOM: Top cover vibrates and cannot be satisfactorily adjusted to eliminate the problem.

SOLUTION: Install the top cover latch shock mounts (05-82) (Figure 1).

Adjust the latches so that the shock mounts are completely compressed.

Note: This is done to ensure that the customer will not have difficulty in lifting the top cover.

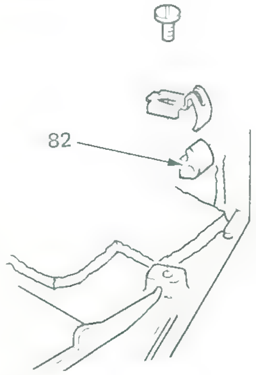

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
05	82	6519448	Shock Mount, Top Cover	2	.02

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Applicable Service Code

420 RELIABILITY

3-12-80

(Revised) 5-21-80

Model(s): 8XX

SUBJECT: Bellringer Bellcrank — Redesigned

The paddle portion of the bellringer bellcrank (10-8) has been lengthened and an extension added to prevent it from slipping over top of the linelock bail (09-80).

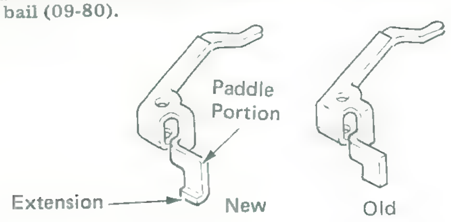

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
10	8	1256662	Bellringer Bellcrank	1	†

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

421 SERVICE INFORMATION

5-7-80

Model(s): 7XX, 8XX

SUBJECT: Torque Limiter Hub And Spring Clamp — Redesigned

PURPOSE: These parts were redesigned to reduce torque limiter spring (25-9) breakage and the loosening or shifting of the clamp (25-5). An extension has been added to the tail of the torque limiter spring clamp (25-5), which will fit under a lug added to the torque limiter hub (25-3).

SOLUTION: Replace the hub and clamp when necessary. The redesigned parts are compatible with previous level parts.

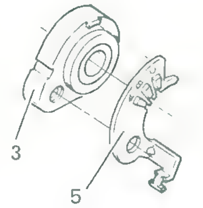

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	3	1256546	Hub	1	†
	5	1256545	Clamp	1	†

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Old level parts will no longer be available.

Estimated Installation Time: .2 Hr.

422 SERVICE INFORMATION

5-7-80

Model(s): 670X

SUBJECT: Announcement — IBM "Selectric" III Typewriter

All detailed service information is contained in the "Selectric" III Typewriter Service Manual Supplement. The following is a list of the design modifications and features of the "Selectric" III Typewriter:

1. Multiple copy control lever removed.
2. New platen knobs.
3. New margin set levers and indicators.
4. See-through margin scale for single pitch models.
5. Lighted margin scale for dual pitch models.
6. Combination page-end indicator and paper support.
7. 54-tooth ratchet standard on all models.
8. New design for optional soundhood.
9. External paper bail control lever.
10. Keyboard arrangements for 92, 94 or 96 characters (92-character standard) — no field conversions.
11. 96-character typehead (compatible with IBM Electronic Typewriters).
12. New style keybuttons (similar to IBM Electronic Typewriters).

The machine identification number, on the left side of the power frame, has 13 digits. The numbers are used to provide the following information:

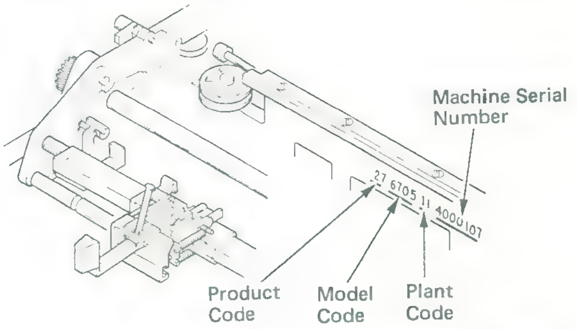

Figure 1

MACHINE TYPE	MODEL CODE
13.5" Single Pitch Fabric	6701
13.5" Single Pitch Non-Correcting	6702
15.5" Single Pitch Correcting	6703
13.5" Dual Pitch Correcting	6704
15.5" Dual Pitch Correcting	6705

(Continued)

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(CEM 422 Continued)

RECOMMENDED PARTS INVENTORY (RPI)

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	333	1303501	Tilt Ring Asm.	1	†
	415	1254802	Socket, Lower Ball	1	†
10	100	1254997	Margin Pointer	2	†
	107	1304140	Carrier Pointer D.P.	1	†
	107	1254690	Carrier Pointer S.P.	1	†
	119	1254991	Lamp	1	†
11	602	1249875	Connector	1	†
12	22	1254411	Bushing, Platen RH	1	†

Note: The parts listed (except 02-333) will be part of the training package. Order individual parts as necessary.

The "Selectric" Adjustment Parts Manual (F/N 241-5939-2) should be used with the "Selectric" Service Manual Supplement (F/N 241-6176-0) to service the "Selectric" III Typewriter.

Call reporting information for the "Selectric" III is the same as for "Selectric" and "Selectric" II Typewriters. This information is found in General CEM No. 5. The product code for "Selectric" III is code 27.

423 SAFETY

5-7-80

Model(s): 670X

SUBJECT: Transformer Housing And Line Cord Plate — Wire Tie

Early level dual pitch machines have a wire tie (11-606) to hold the line cord plate (11-600) and transformer housing in place. If it is necessary to remove the wire tie to service the machine, the wire tie **MUST** be replaced.

Later level machines will have an improved line cord plate and transformer housing. These will be released at a later date.

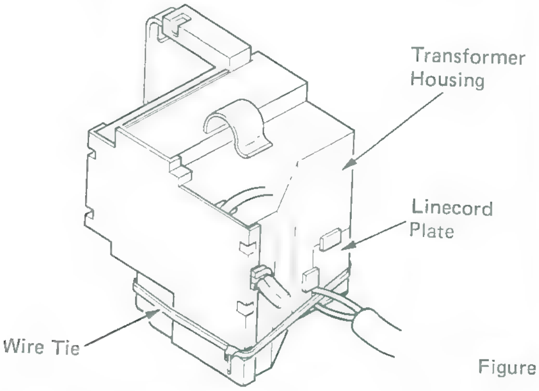


Figure 1

MECH/REF.		PART NO.	DESCRIPTION	QTY.	PRICE
11	606	1245622	Wire Tie	1	†

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hrs.

Use Service Code 32

This CEM Expires: 5-7-81

424 SERVICE INFORMATION

5-21-80

Model(s): All "Selectric" Typewriters

SUBJECT: Paper Bail Arm Screws — Redesigned

Self-locking material has been added to the threads of the paper bail arm screws (22-02) (Figure 1). This will prevent loosening of the screws.

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
22	2	1256661	Screw	1	†

425 SERVICE INFORMATION

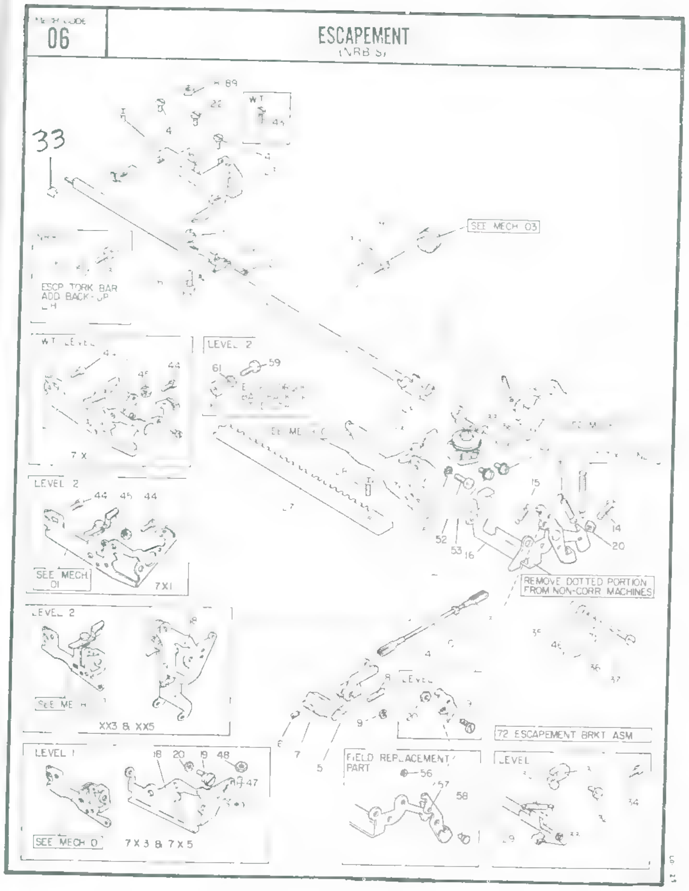
6-18-80

Model(s): 7XX, 8XX, 670X

SUBJECT: APM Correction — Escapement Torque Bar Retainer Clip

The left-hand escapement torque bar retainer clip (06-33) is not shown in the APM (241-5939).

Mark this change in your APM.



426 SERVICE INFORMATION

6-18-80

Model(s): 8XX (RB/S), All 670X

SUBJECT: Backspace Driver Mounting Stud — B/M

Backspace failures due to a broken driver mounting stud may be corrected using the backspace driver mounting stud B/M.

INSTALLATION PROCEDURE

1. Remove driver mounting stud from backplate by tapping lightly.
2. Remove the "C" clip, washer, driver, pitch cam (disconnect pitch cable), and pitch cam spring from the stud.
3. Insert the new stud (24-155) in the pitch cam spring, pitch cam (connect pitch cable) and driver.
4. Install washer and "C" clip on the front of the stud.
5. Install stud through the hole in the backplate and secure with washer and nut (Figure 1).

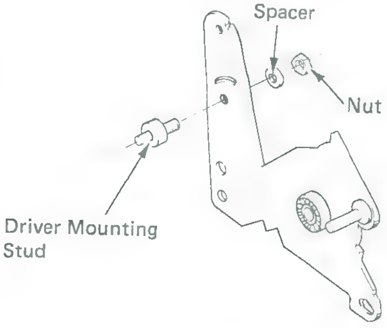


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
24	154	1279024	Stud B/M (Contains Ref. 155, 156 And 157)	1	*
	155	1279023	Stud	1	*
	156	1142264	Nut	1	.10
	157	257984	Washer	1	.04

427 SERVICE INFORMATION 6-18-80

Model(s): 7, 8XX

SUBJECT: Stroke Counters – SER Only

New install stroke counter B/Ms are available **only** by submitting an SER with DCO attached. All necessary parts and installation instructions will be included in the SER. Replacement parts for existing counters will remain available. Installation instructions and hardware for the stroke counter on machines with new style check pawl are included.

TIMELY INFORMATION PROGRAM 6-18-80

Model(s): 7XX, 8XX

SUBJECT: Machine Lock-up/Stalling

Field reports indicate that machine lock-up and stalling problems may be traced to excessive belt tension and/or lack of lubrication of the motor shaft and pulley. Before considering replacement of the motor or other parts, make sure the drive belt tension is correct. Ensure the motor shaft is free of binds, and rotates easily within the motor pulley. If necessary, lubricate the motor shaft with No. 23 grease.

TIMELY INFORMATION PROGRAM 6-18-80

Model(s) : 8XX, 670X

SUBJECT: Sound Reduction B/M

When installing the sound reduction B/M the complete package should be installed. Elimination of any parts from the package results in a less effective sound reduction feature.

TIMELY INFORMATION PROGRAM 5-21-80

Model(s): 7XX, 8XX—With D.I.

SUBJECT: Print Cam Follower Replacement Service Tip

Replacement procedure for the print cam follower (ref. 02-205):

1. *Remove screws in dual impression transport bracket (26-55) and move carrier away from bracket.*
2. *Remove impression lever (02-222).*
3. *Remove element.*
4. *Remove cardholder.*
5. *Tilt rocker asm. up and to rear of machine.*
6. *The "C"-clip and follower can now be removed.*

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CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26] 670X [27]

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A complete set of current "Selectric" Typewriter CEM materials consists of "Selectric" Combined Service Information booklet (F/N 241-5114-2) dated May, 1980, CEMs starting on page one (reissued 5-7-80) and the Technical Information Index found in the back of the Part Number/Price List (F/N 241-5103).

349 SAFETY

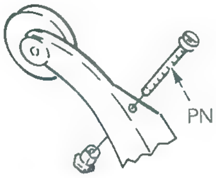
8-24-77

Model(s): 725

SUBJECT: Shift Adjusting Screw.

SAFETY LOCATION: Some reconditioned 725 "Selectric" machines have reached the field with a bristol head lower case adjusting screw in the shift arm. This bristol could cause hand injury when using the hand cycle wheel.

SAFETY PRECAUTION: Check lower case shift adjusting screw on next service call.



SAFETY CORRECTIVE ACTION: Replace bristol-type adjusting screw with fillister head screw (P/N 1203311).

Note: This change applies only to reconditioned 725's that were converted from Selectric I/O's. Part references are shown in the MT/ST—I/O APM (16-49, P/N 1203311).

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .2

Use Service Code 32

This CEM Expires 7-1-80

377 SERVICE INFORMATION

11-29-78

Model(s): 7XX, 8XX, 670X

(Revised) 1-30-80

SUBJECT: Platen Knobs

Level 2 platen knobs (12-55) are now being manufactured with the setscrews in line to reduce possibility of knob loosening.

Levels 1 and 2 platen knobs (12-55) can be used on any left-hand platen shaft.

Level 1 platen knobs can be used on all right-hand platen shafts providing one screw is contacting the flat surface of Levels 2 and 3 shafts (Figure 1).

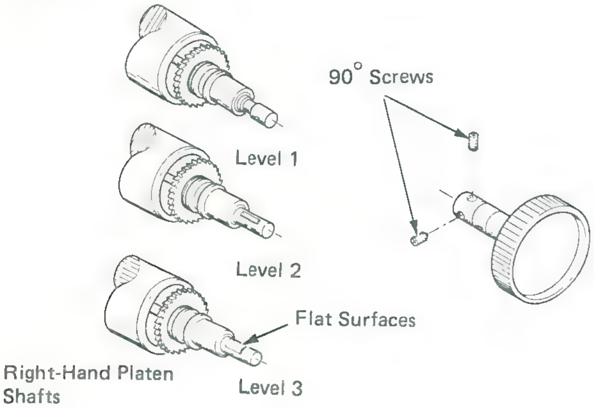


Figure 1

Level 2 platen knobs (12-55), in-line screws, can only be used on Levels 2 and 3 right-hand platen shafts (Figure 2).

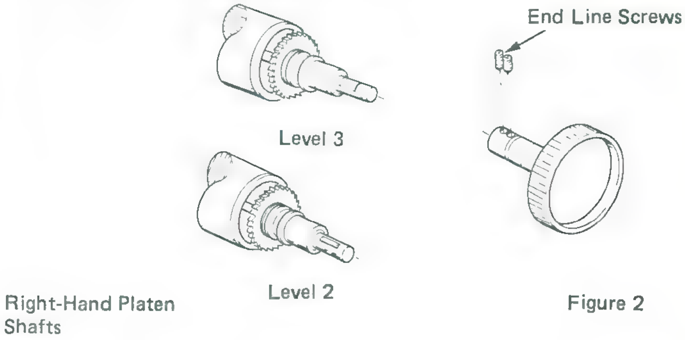


Figure 2

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
12	55	1205427	Knob (In-Line Screws), Level 2	1	1.40
	55	1256532	Knob, 90 Degree Screws, Level 1	1	1.40

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

382 SERVICE INFORMATION

2-28-79

Model(s): 7XX, 8XX, 670X

(Revised) 7-2-80

SUBJECT: Repeat Row Four Keylever — Plant Installed

The row four repeat keylever (21-108) (Figure 1) has been redesigned for greater reliability and ease of installation. It is now available for **PLANT INSTALLATION** on new machines through Special Engineering Request (SER). An SER must be submitted at the time the new machine is ordered. Plant installation is the recommended procedure.

Replacement parts are now available.

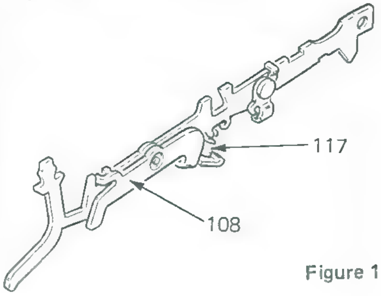


Figure 1

CAUTION: Repeat keylevers should not be installed in adjacent positions; e.g., 39 and 40, etc., because of interference between the keylevers.

Note: The customer **MUST** be advised of the possibility of the last character being a dash.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
21	108	1279468	Keylever, Repeat Row 4	1	1.90
	117	1254963	Spring	1	.03

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .4 Hr.

Use Applicable Service Code

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396 SERVICE INFORMATION

8-1-79

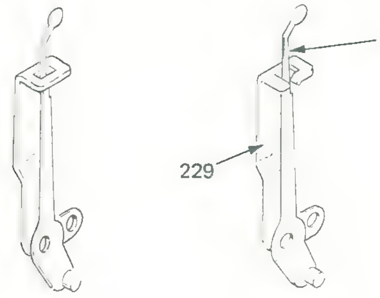
Model(s): 7XX, 8XX, 670X

(Revised) 2-27-80

SUBJECT: Velocity Lever Asm.

For ease of plant assembly, an opening has been added to the upper portion of the velocity lever bracket.

On machines with the new level assemblies, parts can be replaced individually.



Old Level New Level

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	222	1206588	Velocity Lever (Selective Ribbon)	1	2.25
		1141757	Velocity Lever (Non-selective Ribbon)	1	2.30
	229	1141758	Velocity Lever Bracket (Selective And Non-elective Ribbon)	1	.45

Parts Information: Old level assemblies will not be available when current stock is depleted. When replacing old level assemblies it is necessary to order both individual parts.

399 RELIABILITY

9-26-79

Model(s): 8XX

(Revised) 6-18-80

SUBJECT: Left-Hand Ribbon Lift Guide – Level 1

OBSOLETE.

Note: Left-hand ribbon lift guides for Level 1 machines are now available (15-2). Part No. 1206534 is obsolete.

401 SERVICE INFORMATION

10-10-79

Model(s): "Selectric" II Correcting

(Revised) 11-7-79

SUBJECT: Correcting Tape Feed B/M

OBSOLETE: Parts Not Available At This Time

405 RELIABILITY

11-7-79

Model(s): 7XX, 8XX

SUBJECT: Motor Pulley And Pawls – Defective

SYMPTOM: Machine locks up or will not start due to failure of motor pawls to disengage from the motor pulley.

SOLUTION: Check for a minimum clearance of .005" (0.13 mm) between the motor pawls and the steps of the pulley. If this clearance does not exist, replace the motor pawls (11-43) and motor pulley (11-48).

Note: This applies to the one-piece pawl assembly only.

MACHINES AFFECTED: Between approx. S/N: 7X1 — 0797028-0853313, 8X3 — 5023017-5126951, 8X5 — 6068040-6388812.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32

This CEM Expires 9-1-80

407 SAFETY

11-7-79

Model(s): All

SUBJECT: Heat Buildup

SAFETY LOCATION: The motor vent grill.

SAFETY PRECAUTION: If the vent is blocked and the machine is left on, the parts can become hot enough to cause possible injury.

SAFETY CORRECTIVE ACTION: If the vent is blocked, remove the blockage. Advise the customer to maintain proper clearance to ensure air flow.

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26] 670X [27]

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427 SERVICE INFORMATION 6-18-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Stroke Counters – SER Only

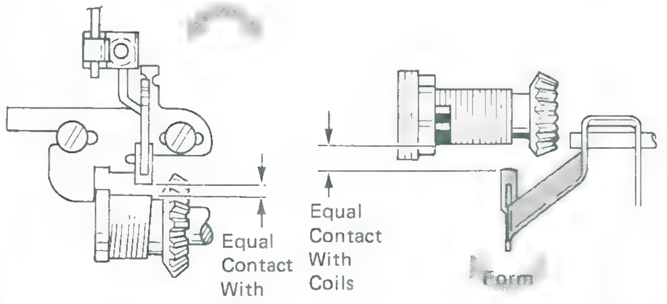
New install stroke counter B/Ms are available **only** by submitting an SER with DCO attached. All necessary parts and installation instructions will be included in the SER. Replacement parts for existing counters will remain available. Installation instructions and hardware for the stroke counter on machines with new style check pawl are included.

428 SERVICE INFORMATION 7-2-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Carrier Return – Uneven/Sluggish/Jerky

SYMPTOM: Uneven or sluggish carrier return can be caused by failure of the carrier return shoe (03-502) to **fully engage** each of the last 2 to 3 coils on the right side of the pinion spring (25-13) (Figure 1).



(Level 1) (Level 2) Figure 1

If the shoe is "cocked" to either side, so that greater pressure is applied to a single spring coil, increased wear will result on both the spring and on the return pinion (25-14) at that point. This leads to rapid loss of adjustment and more frequent need for parts replacement. It is especially important that the shoe NOT apply greater pressure to the inside loop as this prevents the remaining outside coils from driving.

SOLUTION: If experiencing this problem, or when replacing parts in this area, check to ensure that the return shoe engages the coils of the return pinion spring evenly. When making the shoe overlap adjustment, be sure the shoe is not "cocked" and that shoe overlap does not exceed 3 coils. Best results will be achieved with 2 to 2 1/2 coil overlap.

429 RELIABILITY 7-2-80

Model(s): Correcting "Selectric" II – Model 895

SUBJECT: Weak Cycle Clutch Drive/Contaminated Lubricant

PURPOSE: On some Correcting "Selectric" II Model 895s the cycle clutch lubricant may be contaminated by metal particles.

SYMPTOM: The contamination produces a polishing effect on both the cycle clutch spring and cycle clutch pulley arbor, leading to slippage.

SOLUTION: If experiencing weak cycle clutch drive and normal adjustments are ineffective, the following procedure is recommended:

1. Remove cycle shaft assembly and disassemble cycle clutch.
2. Thoroughly remove **all traces** of lubricant from cycle shaft assembly and cycle clutch pulley hub.
3. Install new cycle clutch spring, lubricate, and adjust.

Note: This procedure has proven to be effective in the majority of cases. Replacement of the cycle clutch pulley hub is not recommended unless these steps fail to correct the problem.

MACHINES AFFECTED. *Between approx. S/N: Model 895 - 4765000 to 4874000.*

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .5 Hr.

Use Service Code 32

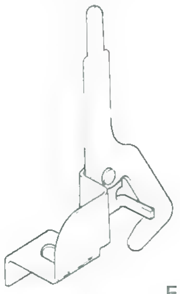
This CEM Expires 6-1-81

430 SERVICE INFORMATION 7-2-80

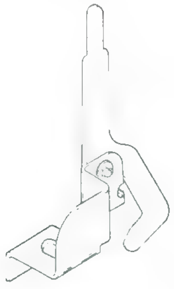
Model(s): 8XX, 670X

SUBJECT: CENTER COVER BRACKET – REDESIGNED

The center cover latch bracket (05-43, 05-18) has been redesigned so that the latch lever (05-44, 05-16) can be installed to the inside of the bracket (Figure 1). This change gives more clearance between the lever and the foam, and makes it easier to unlatch the covers.



New Level Figure 1



Old Level Figure 2

Until the new bracket is available, manufacturing is using the old level parts (Figure 2) and reversing the lever (Figure 3). This method can also be used in the field if desired.

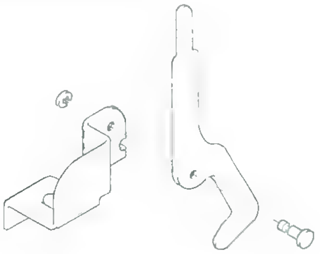


Figure 3

Modified Old Level

431 SERVICE INFORMATION 7-2-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Multiplying Lever Mounting Stud B/M

The multiplying lever is not included in B/M 25-324. This lever can be ordered under 25-250. Mark this reference number in your APM (25-250) and add the reference number and P/N to your PN/PL.

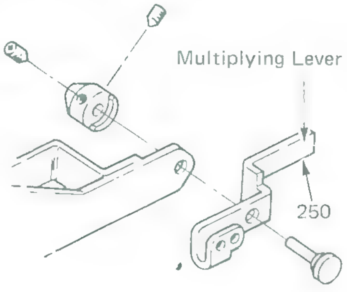


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	250	1128016	Multiplying Lever	1	.10

432 SERVICE INFORMATION 7-2-80

Model(s): "Selectric" III Typewriters – 670X

SUBJECT: PN/PL Correction

The fan (11-400) (sound reduction machines only) should be P/N 1205958. Mark this change in your PN/PL.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
11	400	1205958	Fan, Sound Reduction Machines Only	1	1.40

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TIMELY INFORMATION PROGRAM

6-18-80

Model(s): 7XX, 8XX

SUBJECT: Machine Lock-up/Stalling

Field reports indicate that machine lock-up and stalling problems may be traced to excessive belt tension and/or lack of lubrication of the motor shaft and pulley. Before considering replacement of the motor or other parts, make sure the drive belt tension is correct. Ensure the motor shaft is free of binds, and rotates easily within the motor pulley. If necessary, lubricate the motor shaft with No. 23 grease.

TIMELY INFORMATION PROGRAM

6-18-80

Model(s) : 8XX, 670X

SUBJECT: Sound Reduction B/M

When installing the sound reduction B/M the complete package should be installed. Elimination of any parts from the package results in a less effective sound reduction feature.

TIMELY INFORMATION PROGRAM

5-21-80

Model(s): 7XX, 8XX—With D.I.

SUBJECT: Print Cam Follower Replacement Service Tip

Replacement procedure for the print cam follower (ref. 02-205):

1. *Remove screws in dual impression transport bracket (26-55) and move carrier away from bracket.*
2. *Remove impression lever (02-222).*
3. *Remove element.*
4. *Remove cardholder.*
5. *Tilt rocker asm. up and to rear of machine.*
6. *The "C"-clip and follower can now be removed.*

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26] 670X [27]

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427 SERVICE INFORMATION 6-18-80

Model(s): 7XX, 8XX, 670X

SUBJECT: **Stroke Counters – SER Only**

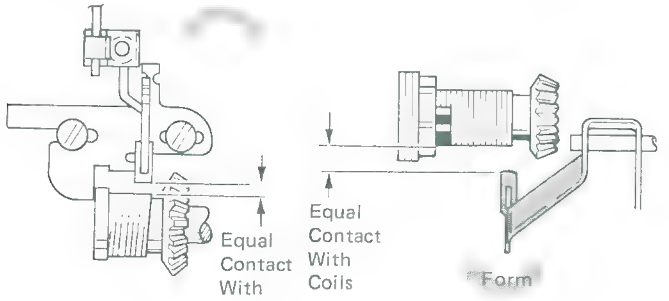
New install stroke counter B/Ms are available **only** by submitting an SER with DCO attached. All necessary parts and installation instructions will be included in the SER. Replacement parts for existing counters will remain available. Installation instructions and hardware for the stroke counter on machines with new style check pawl are included.

428 SERVICE INFORMATION 7-2-80

Model(s): 7XX, 8XX, 670X

SUBJECT: **Carrier Return – Uneven/Sluggish/Jerky**

SYMPTOM: Uneven or sluggish carrier return can be caused by failure of the carrier return shoe (03-502) to **fully engage** each of the last 2 to 3 coils on the right side of the pinion spring (25-13) (Figure 1).



(Level 1) *(Level 2)* Figure 1

If the shoe is "cocked" to either side, so that greater pressure is applied to a single spring coil, increased wear will result on both the spring and on the return pinion (25-14) at that point. This leads to rapid loss of adjustment and more frequent need for parts replacement. It is especially important that the shoe NOT apply greater pressure to the inside loop as this prevents the remaining outside coils from driving.

SOLUTION: If experiencing this problem, or when replacing parts in this area, check to ensure that the return shoe engages the coils of the return pinion spring evenly. When making the shoe overlap adjustment, be sure the shoe is not "cocked" and that shoe overlap does not exceed 3 coils. Best results will be achieved with 2 to 2 1/2 coil overlap.

429 RELIABILITY 7-2-80

Model(s): Correcting "Selectric" II – Model 895

SUBJECT: **Weak Cycle Clutch Drive/Contaminated Lubricant**

PURPOSE: On some Correcting "Selectric" II Model 895s the cycle clutch lubricant may be contaminated by metal particles.

SYMPTOM: The contamination produces a polishing effect on both the cycle clutch spring and cycle clutch pulley arbor, leading to slippage.

SOLUTION: If experiencing weak cycle clutch drive and normal adjustments are ineffective, the following procedure is recommended:

1. Remove cycle shaft assembly and disassemble cycle clutch.
2. Thoroughly remove **all traces** of lubricant from cycle shaft assembly and cycle clutch pulley hub.
3. Install new cycle clutch spring, lubricate, and adjust.

Note: This procedure has proven to be effective in the majority of cases. Replacement of the cycle clutch pulley hub is not recommended unless these steps fail to correct the problem.

MACHINES AFFECTED. *Between approx. S/N: Model 895 – 4765000 to 4874000.*

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .5 Hr.

Use Service Code 32

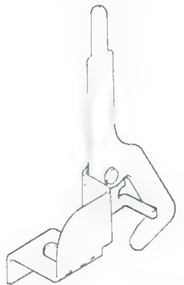
This CEM Expires 6-1-81

430 SERVICE INFORMATION 7-2-80

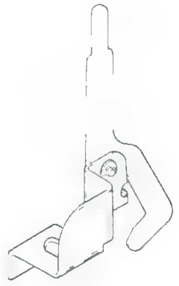
Model(s): 8XX, 670X

SUBJECT: **Center Cover Bracket – Redesigned**

The center cover latch bracket (05-43, 05-18) has been redesigned so that the latch lever (05-44, 05-16) can be installed to the inside of the bracket (Figure 1). This change gives more clearance between the lever and the foam, and makes it easier to unlatch the covers.



New Level Figure 1



Old Level Figure 2

Until the new bracket is available, manufacturing is using the old level parts (Figure 2) and reversing the lever (Figure 3). This method can also be used in the field if desired.

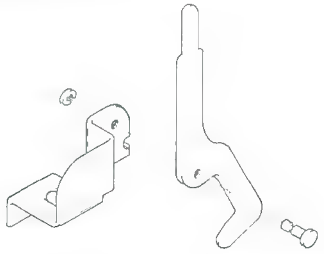


Figure 3

Modified Old Level

431 SERVICE INFORMATION 7-2-80

Model(s): 7XX, 8XX, 670X

SUBJECT: **Multiplying Lever Mounting Stud B/M**

The multiplying lever is not included in B/M 25-324. This lever can be ordered under 25-250. Mark this reference number in your APM (25-250) and add the reference number and P/N to your PN/PL.

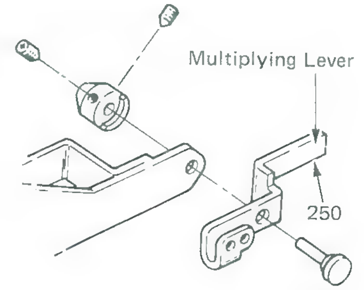


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	250	1128016	Multiplying Lever	1	.10

432 SERVICE INFORMATION 7-2-80

Model(s): "Selectric" III Typewriters – 670X

SUBJECT: **PN/PL Correction**

The fan (11-400) (sound reduction machines only) should be P/N 1205958. Mark this change in your PN/PL.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
11	400	1205958	Fan, Sound Reduction Machines Only	1	1.40

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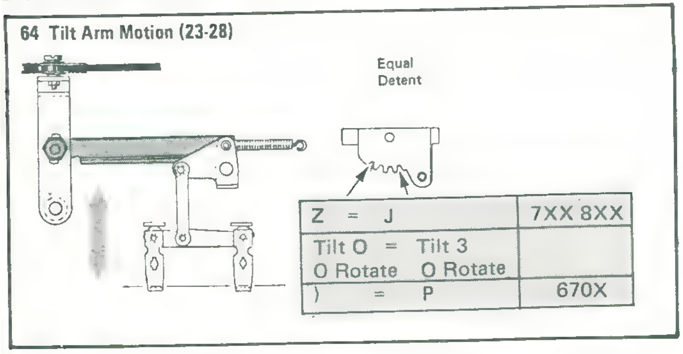
433 SERVICE INFORMATION

Model(s): 7XX, 8XX and 670X

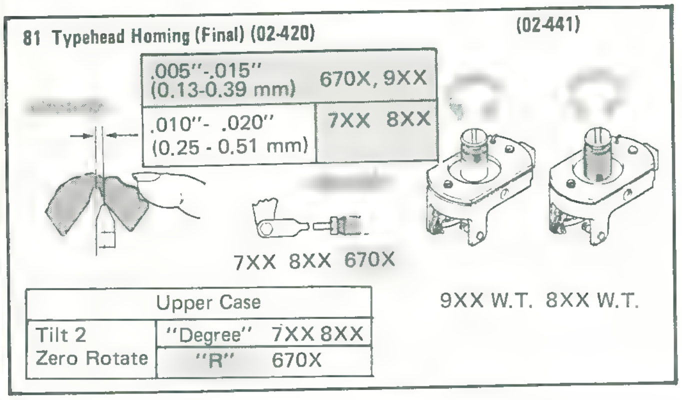
SUBJECT: Adjustment Parts Manual (APM F/N 241-5939-2) Correction

The shaded areas in the frames (64 and 81) below are corrections that should be marked in your APM.



64 Tilt Arm Motion (23-28)

Z = J	7XX 8XX
Tilt O = Tilt 3 O Rotate O Rotate	
) = P	670X



81 Typehead Homing (Final) (02-420)

(02-441)

.005"-.015" (0.13-0.39 mm)	670X, 9XX
.010"- .020" (0.25 - 0.51 mm)	7XX 8XX

Upper Case	
Tilt 2 Zero Rotate	"Degree" 7XX 8XX
	"R" 670X

TIMELY INFORMATION PROGRAM 6-18-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Machine Lock-up/Stalling

Field reports indicate that machine lock-up and stalling problems may be traced to excessive belt tension and/or lack of lubrication of the motor shaft and pulley. Before considering replacement of the motor or other parts, make sure the drive belt tension is correct. Ensure the motor shaft is free of binds, and rotates easily within the motor pulley. If necessary, lubricate the motor shaft with No. 23 grease.

TIMELY INFORMATION PROGRAM 6-18-80

Model(s) : 8XX, 670X

SUBJECT: Sound Reduction B/M

When installing the sound reduction B/M the complete package should be installed. Elimination of any parts from the package results in a less effective sound reduction feature.

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26] 670X [27]

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435 RELIABILITY

9-10-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Fabric Ribbon Reverse Failures

PURPOSE: Some replacement ribbon plates may have a bind in the area of the stud and the fork in the plate (Figure 1).

SYMPTOM: Ribbon fails to reverse.

SOLUTION: Check for binds in the area shown in Figure 1. Also check new assemblies before installing. If a bind is found on a new assembly return as a new defective part per General Administrative CEM No. 35.

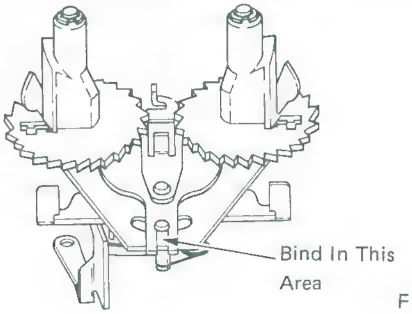


Figure 1

436 SERVICE INFORMATION

9-10-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Motor Pawl Assembly – Washer Added

Some machines have nylon washers added to the motor pawl assembly (Figure 1). If experiencing start problems, check for a bind between the washer and the pawls. To eliminate the bind, remove the washers.

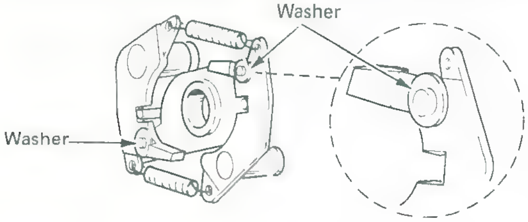


Figure 1

MACHINES AFFECTED: Approx. S/N: 7X1, 0885914 — 0907710; 8X3, 5200758 — 5250192; 8X5, 6603755 — 6730476; 6701, 0000001 — 0000095; 6702, 1000001 — 1003567; 6703, 2000001 — 2004383; 6704, 3000001 — 3000761; 6705, 4000001 — 4038927.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Service Code 32

437 SERVICE INFORMATION

9-10-80

Model(s): 670X

SUBJECT: Transformer Replacement – Wire Routing

There is a possibility of interference between the transformer secondary wires and the gear train. To reduce this possibility when replacing the transformer, the secondary wires should be placed on the outside of the Tab/Set Clear link. Figure 1 shows the correct wire path with the machine in the service position. Some early production machines have a metal clamp to secure the wires. Wire ties may be used if necessary.

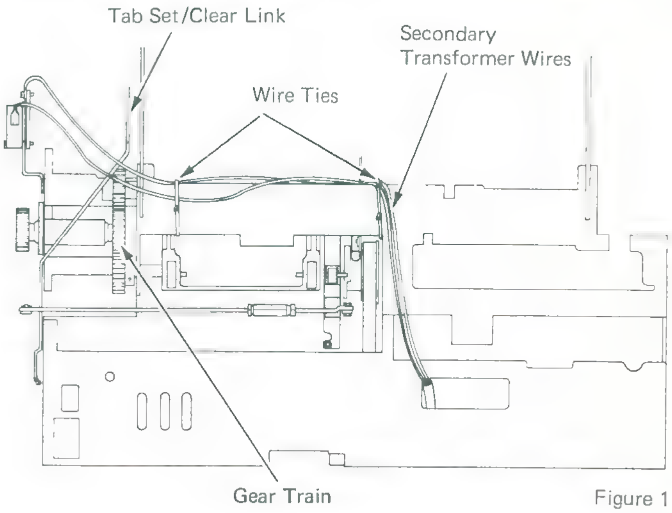


Figure 1

438 SERVICE INFORMATION

9-24-80

Model(s): 7XX, 8XX, 670X

(Revised) 10-8-80

SUBJECT: Upper Idler Gear Bushing – Redesigned

OBSOLETE.

439 SERVICE INFORMATION

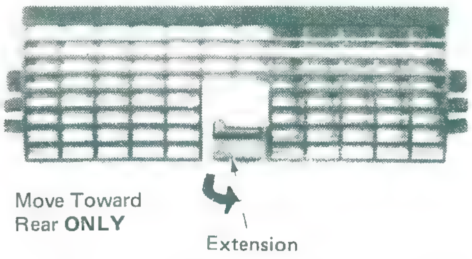
9-24-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Motor Vent Grill Extension – Breakage

Moving the motor vent grill extension too far to the rear or toward the front of the machine may cause it to crack or break. The extension should be moved toward the rear of the machine only far enough to let the linecord in. This extension is required to maintain double insulation.

Note: CSI (F/N 241-5114-2) page 17, item 8, also applies to "Selectric" III typewriters.



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440 SERVICE INFORMATION

9-24-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Cable Guide – Redesigned

The velocity cable guide (02-217) located on the left-hand side of the carrier has been redesigned. The guide is now installed by hooking it over the carrier casting instead of it being held in place by the retainer (02-49) (Figure 1).

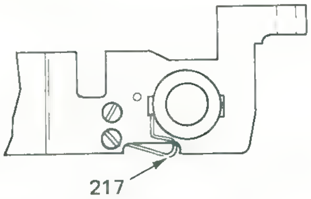

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY	PRICE
02	217	1141637	Cable, Guide	1	.05

441 SERVICE INFORMATION

11-5-80

Model(s): 8XX, 670X

SUBJECT: Two-Piece Rotate Arm – Redesigned

The two-piece rotate arm has been redesigned to interlock the upper and lower rotate arms together (Figure 1). This will prevent the parts from spreading during a print operation.

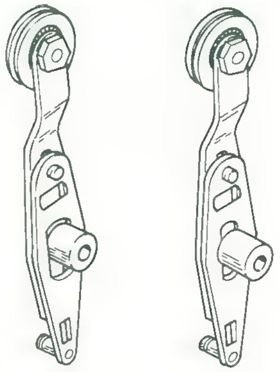

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	514	1147196	Two-Piece Rotate Arm Asm.	1	2.75

Parts Information: The individual parts (upper and lower arm) will no longer be available. The old style two-piece arm will be used until depleted.

442 SERVICE INFORMATION

11-5-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Homing Changes – Rotate Tape Replacement

PURPOSE: Reduce rotate homing adjustment change (drift) after rotate tape replacement.

SYMPTOM: Rotate homing adjustment changes (drifts) within a short time after replacement of a rotate tape. This can occur if the rotate tape is not fully seated, i.e., pulled tight, around the rotate pulley. Normal use causes the tape to seat properly, and the homing adjustment changes. This symptom is sometimes incorrectly referred to as "tape stretch."

SOLUTION: After replacement of the rotate tape and completion of the rotate adjustments, type several lines of repeat underscores. Then check and make the typehead homing adjustment as required.

Note: Machine damage can occur from operating the repeat underscore before making correct rotate adjustments, as well as from operating the print mechanism without the platen and element in place.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

443 SERVICE INFORMATION

11-5-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Tilt Rings – Assembled Incorrectly

There is a possibility of tilt rings (02-333, 335) assembled with incorrect tilt ring bases (02-300). 96 character and 88 character tilt ring bases are not interchangeable. There is a difference in the angle and position of the tilt detent teeth.

If experiencing vertical alignment problems, check the tilt ring base. 96 character tilt ring bases have a small notch to the rear of the zero tilt tooth, (Figure 1). 88 character tilt ring bases have no notch in this location.

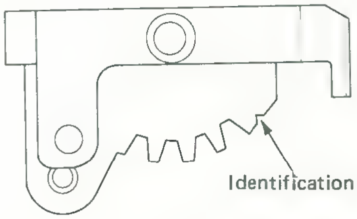

Figure 1

NOTE: Early production 96 character tilt ring bases have a black oxide finish, as do the 88 character bases. Current production 96 character bases are copper colored to aid in identification and elimination of the asm. problem.

If this condition is encountered, replace the tilt ring.

Check field stock of tilt rings, and return any which are incorrectly assembled as NEW DEFECTIVE.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Applicable Service Code

444 SERVICE INFORMATION

11-5-80

Model(s): 670X

SUBJECT: Custom Keybuttons

The blanket part number for custom keybuttons for "Selectric" III is P/N 1302800.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

445 SERVICE INFORMATION

Model(s): 7XX, 8XX, 670X

SUBJECT: Rotate Bellcrank Stud – Installation

The rotate bellcrank stud (23-483) now press/fits into the power frame. Install the stud through bellcrank (23-220), differential bracket (23-485), spacer (23-487) and power frame. Start nut (23-102) on the stud threads and tighten the nut until the stud bottoms against the power frame.

TIMELY INFORMATION PROGRAM

11-5-80

Model(s): 8XX, 670X

SUBJECT: Ribbon Feed Failures – Wear Of Spiked Driver Gear

Ribbon feed failures due to worn spiked driver gear (or ribbon feed gear) can result from interference between the spiked driver (15-57) and the tilt pulley spring anchor bracket (02-327). Check for adequate clearance with the impression control at stick 5 and the spiked driver positioned at its nearest point to the bracket. Reposition or form the bracket as necessary to provide clearance.

NOTE. Check powered flight adjustment. Increasing powered flight beyond specified adjustment range increases exposure to interference and may result in intermittent impression variations as well as damage to the spiked driver gears.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

CEM Customer Engineering Memorandum

"Selectric" Typewriter

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> **A complete set of current "Selectric" Typewriter CEM materials consists of "Selectric" Combined Service Information booklet (F/N S241-5114) dated May, 1980, CEMs starting on page one (reissued 5-7-80) and the Technical Information Index found in the back of the Part Number/Price List (F/N S241-5103).**

349 SAFETY 8-24-77

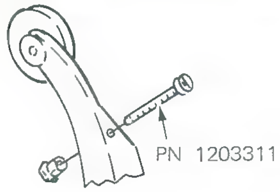
Type(s): 6121

SUBJECT: Shift Adjusting Screw

SAFETY LOCATION: Some reconditioned 725 "Selectric" machines have reached the field with a splined head lower case adjusting screw in the shift arm. This spline headed screw could cause hand injury when using the hand cycle wheel.

SAFETY PRECAUTION: Check lower case shift adjusting screw on next service call.

SAFETY CORRECTIVE ACTION: Replace spline type adjusting screw with screw (P/N 1203311).



Note: This change applies only to reconditioned 725's that were converted from Selectric I/O's. Part references are shown in the MT/ST—I/O APM (16-49, P/N 1203311).

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .2

Use Service Code 32

This CEM Expires 7-1-80

377 SERVICE INFORMATION

11-29-78
(Revised) 1-30-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Platen Knobs

Level 2 platen knobs (12-55) are now being manufactured with the setscrews in line to reduce possibility of knob loosening.

Levels 1 and 2 platen knobs (12-55) can be used on any left-hand platen shaft.

Level 1 platen knobs can be used on all right-hand platen shafts providing one screw is contacting the flat surface of Levels 2 and 3 shafts (Figure 1).

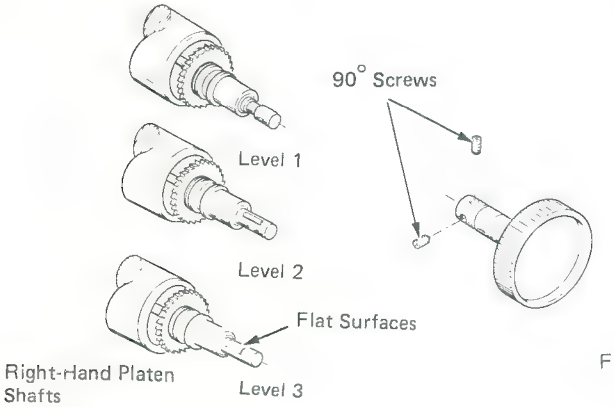


Figure 1

Level 2 platen knobs (12-55), in-line screws, can only be used on Levels 2 and 3 right-hand platen shafts (Figure 2).

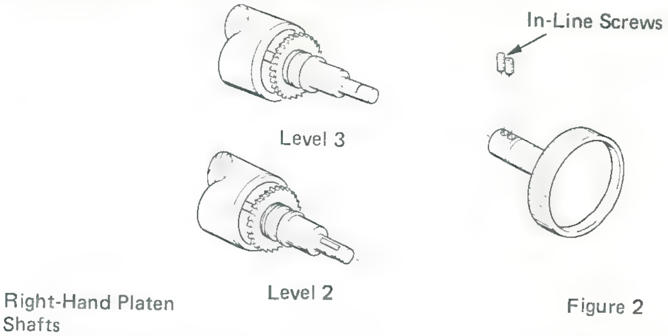


Figure 2

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
12	55	1205427	Knob (In-Line Screws), Level 2	1	1.40
	55	1256532	Knob, 90 Degree Screws, Level 1	1	1.40

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

382 SERVICE INFORMATION

2-28-79
(Revised) 7-2-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Repeat Row Four Keylever – Plant Installed

The row four repeat keylever (21-108) (Figure 1) has been redesigned for greater reliability and to make installation easier. It is now available for **PLANT INSTALLATION** on new machines through Special Engineering Request (SER). An SER must be submitted at the time the new machine is ordered. Plant installation is the recommended procedure.

Replacement parts are now available.

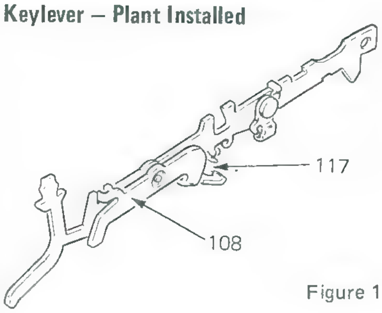


Figure 1

CAUTION: Repeat keylevers should not be installed next to each other, e.g., 39 and 40, etc., because of interference between the keylevers.

NOTE: The customer **MUST** be told of the possibility of the last character being a dash.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
21	108	1279468	Keylever, Repeat Row 4	1	1.90
	117	1254963	Spring	1	.03

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .4 Hr.

Use Applicable Service Code

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396 SERVICE INFORMATION

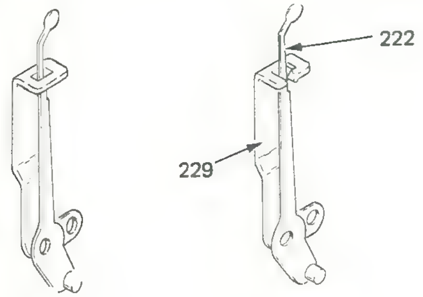
8-1-79
(Revised) 2-27-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Velocity Lever Asm.

For ease of plant assembly, an opening has been added to the upper portion of the velocity lever bracket.

On machines with the new level assemblies, parts can be replaced individually.



Old Level

New Level

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	222	1206588	Velocity Lever (Selective Ribbon)	1	2.25
		1141757	Velocity Lever (Non-selective Ribbon)	1	2.30
	229	1141758	Velocity Lever Bracket (Selective And Non-elective Ribbon)	1	.45

Parts Information: Old level assemblies will not be available when current stock is depleted. When replacing old level assemblies it is necessary to order both individual parts

399 RELIABILITY

9-26-79
(Revised) 6-18-80

Type(s): 6126

SUBJECT: Left-Hand Ribbon Lift Guide – Level 1

OBSOLETE.

Note: Left-hand ribbon lift guides for Level 1 machines are now available (15-2). Part No. 1206534 is obsolete.

401 SERVICE INFORMATION

10-10-79
(Revised) 12-17-80

Type(s): 6126, 6703, 6704, 6705

SUBJECT: Correcting Tape Feed B/M

OBSOLETE: Refer To APM (26-13).

405 RELIABILITY

11-7-79

Type(s): 6121, 6126

SUBJECT: Motor Pulley And Pawls – Defective

SYMPTOM: Machine locks up or will not start due to failure of motor pawls to disengage from the motor pulley.

SOLUTION: Check for a minimum clearance of .005" (0.13 mm) between the motor pawls and the steps of the pulley. If this clearance does not exist, replace the motor pawls (11-43) and motor pulley (11-48).

Note: This applies to the one-piece pawl assembly only.

MACHINES AFFECTED: Between approx. S/N: Type 6121 (Model 7X1) 0797028 — 0853313; Type 6126 (Model 8X3) 5023017 — 5126951, (Model 8X5) 6068040 — 6388812.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32

This CEM Expires 9-1-80

407 SAFETY

11-7-79

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Heat Buildup

SAFETY LOCATION: The motor vent grill.

SAFETY PRECAUTION: If the vent is blocked and the machine is left on, the parts can become hot enough to cause possible injury.

SAFETY CORRECTIVE ACTION: If the vent is blocked, remove the blockage. Advise the customer to maintain proper clearance to ensure air flow.

CEM Customer Engineering Memorandum

"Selectric" Typewriter

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409 SERVICE INFORMATION

1-30-80
(Revised) 6-18-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Paper Bail Arm Spring

Several different levels of paper bail arm springs (22-33, 26-209) have been used in production of "Selectric" Typewriters. Each level provides a slightly different amount of spring tension. The current production paper bail arm spring, P/N 1206821, obsoletes all previous levels and may be used on any level "Selectric" Typewriter. Machines above approximate S/N: — 7X1 — 0808048, 8X3 — 5044864, 8X5 — 6133326, Canada 8X5 — 4844000, and 670X — All, have this spring installed.

The paper bail arm springs in Parts Packet No. 5 are not current level. Scrap all paper bail arm springs in Parts Packet No. 5. Order replacement quantities 22-33 or 26-209.

Paper bail arm springs have been deleted from Parts Packet No. 5.

When paper bail spring replacement is required on machines below the serial number range listed above, both springs should be replaced. The universal paper bail Bill of Material (22-219 and 26-104) includes the correct level springs.

410 SERVICE INFORMATION

-30-80
(Revised) 9-24-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Ribbon Lift Arm — Stripped Screw

PURPOSE: If the mounting screw hole for the ribbon lift arm (15-25) is stripped, an additional nut (15-5) can be added to the inside of the carrier to retain the screw (15-6).

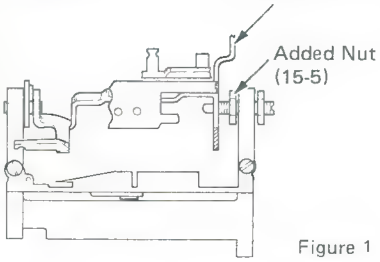

Figure 1

411 SERVICE INFORMATION

1-30-80

Type(s): 6126

SUBJECT: Margin Rack Gear

A limited number of dual pitch machines will be shipped to the field with 6-32 screws (P/N 1175107 parts package 01), instead of the standard 4-40 screw (P/N 1175102). Margin rack gears will be black and the screws will require using a number 6 fluted wrench.

413 RELIABILITY

2-13-80

Type(s): 6126

SUBJECT: Correction Tape — Intermittent Feed Failures

Intermittent correction tape feed failures and/or incomplete lift off may be caused by a defective pawl feed mounting screw (26-5). The screw is undersize in the area where the washer (26-7) is mounted (Figure 1). This allows the washer to be off center and partially cover the teeth on the spiked take-up ratchet (Figure 2).

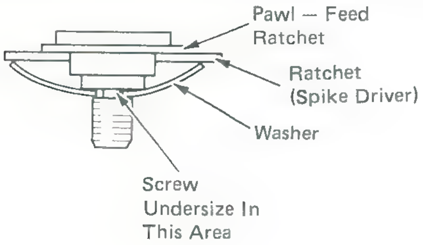

Figure 1

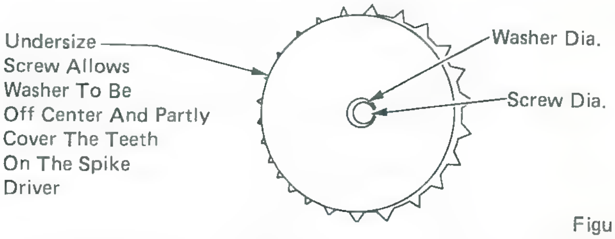
Undersize Screw Allows Washer To Be Off Center And Partly Cover The Teeth On The Spike Driver
Washer Dia.
Screw Dia.

Figure 2

When experiencing this problem, replace the screw (26-5).

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
26	5	1290653	Screw	1	.15

MACHINES AFFECTED: Approx. S/N: Type 6126 (Model 8X3) 5147714 — 5181900; (Model 8X5) 6462050 — 6557510.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Service Code 32

This CEM Expires 12-1-80

415 RELIABILITY

2-27-80
(Revised) 12-17-80

Type(s): 6126

SUBJECT: Escapement Bracket — Washer/Clip Added

A limited number of machines were manufactured with a "C"-clip or washer between the screw (19-7) and the tab lever (Figure 1).

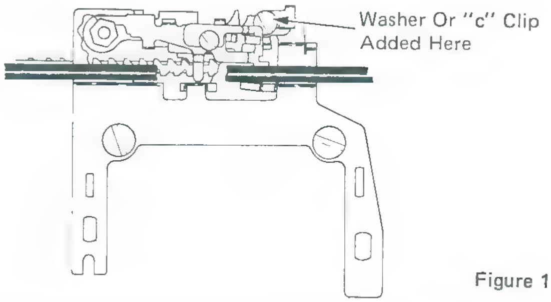

Figure 1

The washer or "C"-clip will prevent the tab lever from falling under the extension of the escapement bracket (Figure 2).

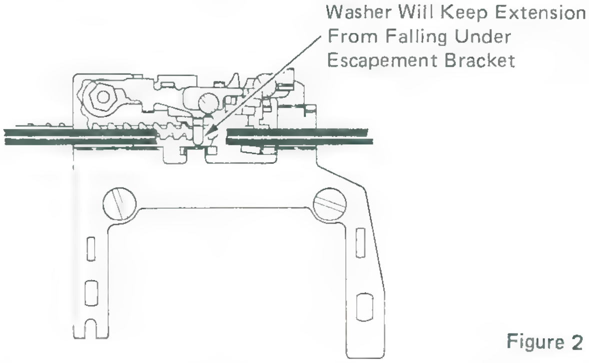
Washer Will Keep Extension From Falling Under Escapement Bracket

Figure 2

If experiencing a binding tab lever and the washer has been added; and normal adjustments do not correct the problem; replace the escapement bracket.

MACHINES AFFECTED: Approx. S/N: Type 6126 (Model 8X5) 6513000-6545800; (Model 8X3) 5155558-5188352.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: 2.0 Hrs.

Use Service Code 33

This CEM Expires 1/15/81

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416 SERVICE INFORMATION

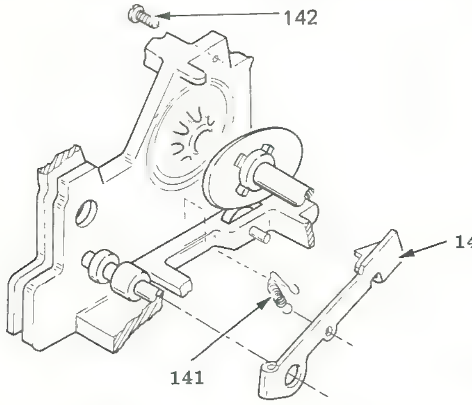
2-27-80

Type(s): 6121, 6126

(Revised) 9-24-80

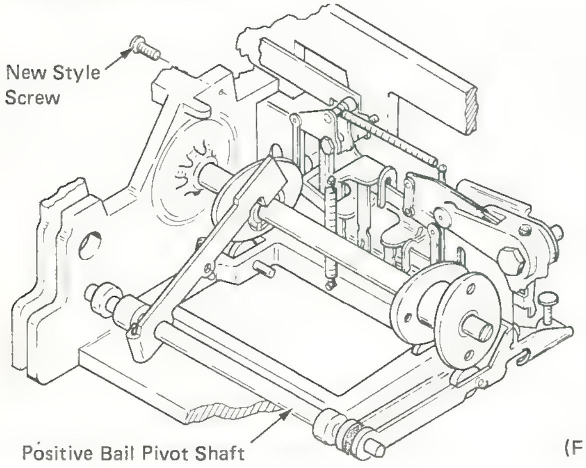
SUBJECT: Check Pawl, Spring, Stud And Tab Keylever — Redesigned

PURPOSE: The cycle clutch check pawl, stud and spring has been designed to improve cycle shaft cam stop location (Figure 1).



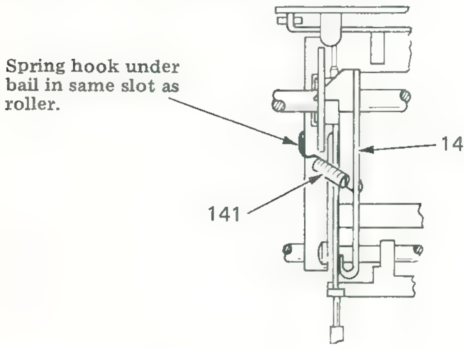
(Figure 1)

The new pawl (23-140) is now mounted on the positive bail pivot shaft (23-118). The screw (23-142) replaces the studs (23-417, 423). The studs (23-417), 423) will remain available for replacement on old level machines (Figure 2).



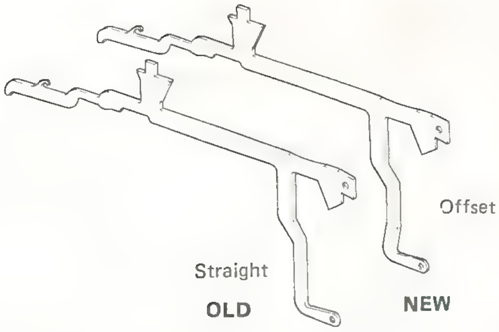
(Figure 2)

The pawl is spring loaded to the left by spring (23-141), and is connected to the positive bail as shown in Figure 3.



(Figure 3)

The tab keylever (18-28, 19-43) has been redesigned (Figure 4), to ensure there is no interference between the check pawl (23-140) and tab keylever. The new redesigned tab keylever will work on all level machines. The old level keylever will be obsoleted. Scrap all old level keylevers and reorder new style.

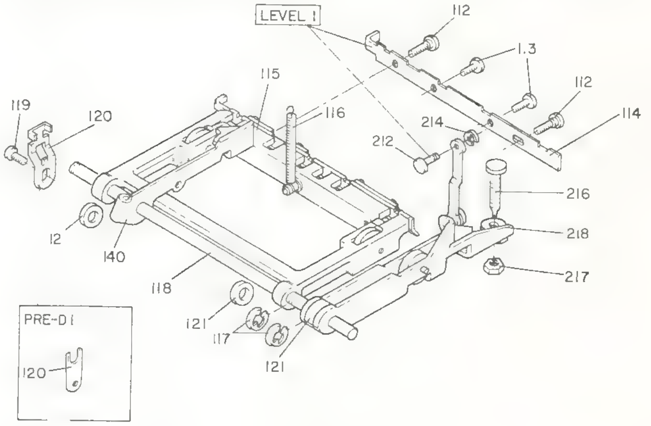


(Figure 4)

Removal Procedure For Check Pawl:

1. Remove the retainer screw (23-119) and retainer plate (23-120).
2. Remove the two "C"-clips (23-117) that retain the -5 latch bail (23-218).
3. Move the positive bail shaft (23-118) to the left far enough to remove the check pawl (23-140).

Note: When replacing the shaft: (1) Ensure the felt pad (23-121) is between the two lugs of the -5 latch bail (23-218), (2) Make sure the notch on the right end of the shaft fits into the "D" shape window of the cycle clutch latch plate (21-218).



MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
18 28	1256683	Tab Keylever	1	1.10
19 43	1256683	Tab Keylever	1	1.10
23 140	1256655	Check Pawl	1	2.40
141	1256658	Spring	1	.15
142	1256659	Screw	1	.02

MACHINES AFFECTED: Above S/N: Type 6126 (Model 8X3) — 5170000; (Model 8X5) — 6550000; Type 6121 (Model 721) — 0860000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Old style check pawls, springs and studs will remain available for replacement in existing machines.

417 SERVICE INFORMATION

3-12-80

Type(s): 6121, 6126

(Revised) 12-17-80

SUBJECT: Cover Hinge — B/M

A bill of material is now available for 7XX (04-34) and 8XX (05-23) machines. The bill of material includes the LH and RH hinge top cover, plastic clamp and screws.

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
04 34	1279487	Cover Hinge B/M (Includes: Ref. 4, 32, 6)	1	2.05
05 23	1279486	Cover Hinge B/M (Includes: Ref. 4, 5, 6, 49)	1	1.60

418 SAFETY 3-12-80

Type(s): 6126

SUBJECT: Motor Label

On Canadian-built 895 machines there is a possibility of the motor label adhesive failing. The label could curl up and be near or touching the tab rack, reducing the effectiveness of the protective insulation system. If this condition exists, remove the label. It is not necessary to replace the label.

SAFETY PRECAUTION:

NOTE: Removal of the label may cause the motor to shift position. Recheck motor position.

MACHINES AFFECTED: S/N between approx. 4514800 — 4864161.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

419 SERVICE INFORMATION 3-12-80

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Top Cover Latch — Shock Mounts

SYMPTOM: Top cover vibrates and cannot be satisfactorily adjusted to eliminate the problem.

SOLUTION: Install the top cover latch shock mounts (05-82) (Figure 1).

Adjust the latches so that the shock mounts are completely compressed.

Note: This is done to ensure that the customer will not have difficulty in lifting the top cover.

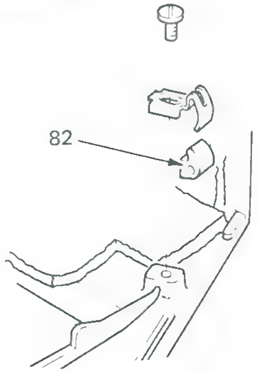


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
05	82	6519448	Shock Mount, Top Cover	2	.02

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Applicable Service Code

420 SERVICE INFORMATION 3-12-80 (Revised) 12-17-80

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Bellringer Bellcrank — Redesigned

The paddle portion of the bellringer bellcrank (10-8) has been lengthened and an extension added to prevent it from slipping over top of the linelock bail (09-80).

This bellcrank will also stop unwanted correcting tape feed when typing through the right hand margin, F/N 241-5114, item 3, page 27.

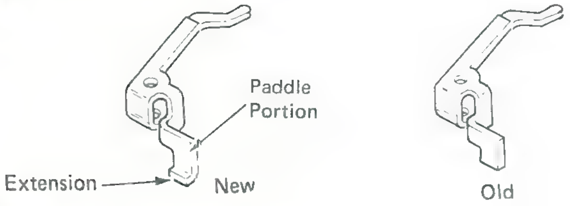


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
10	8	1256662	Bellringer Bellcrank	1	.30

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

421 SERVICE INFORMATION 5-7-80 (Revised) 12-17-80

Type(s): 6121, 6126

SUBJECT: Torque Limiter Hub And Spring Clamp — Redesigned

PURPOSE: These parts were redesigned to reduce torque limiter spring (25-9) breakage and the loosening or shifting of the clamp (25-5). An extension has been added to the tail of the torque limiter spring clamp (25-5), which will fit under a lug added to the torque limiter hub (25-3).

SOLUTION: Replace the hub and clamp when necessary. The redesigned parts are compatible with previous level parts.

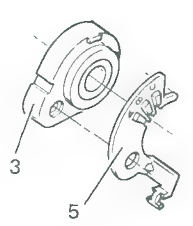


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	3	1256545	Hub	1	1.00
	5	1256546	Clamp	1	.10

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Old level parts will no longer be available.

Estimated Installation Time: .2 Hr.

422 SERVICE INFORMATION 5-7-80 (Revised) 12-17-80

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: Announcement — IBM "Selectric" III Typewriter

All detailed service information is contained in the "Selectric" III Typewriter Service Manual Supplement. The following is a list of the design modifications and features of the "Selectric" III Typewriter:

1. Multiple copy control lever removed.
2. New platen knobs.
3. New margin set levers and indicators.
4. See-through margin scale for single pitch models.
5. Lighted margin scale for dual pitch models.
6. Combination page-end indicator and paper support.
7. 54-tooth ratchet standard on all models.
8. New design for optional soundhood.
9. External paper bail control lever.
10. Keyboard arrangements for 92, 94 or 96 characters (92-character standard) — no field conversions.
11. 96-character typehead (compatible with IBM Electronic Typewriters).
12. New style keybuttons (similar to IBM Electronic Typewriters).
13. New cover design.

The machine identification number, on the left side of the power frame, has 13 digits. The numbers are used to provide the following information:

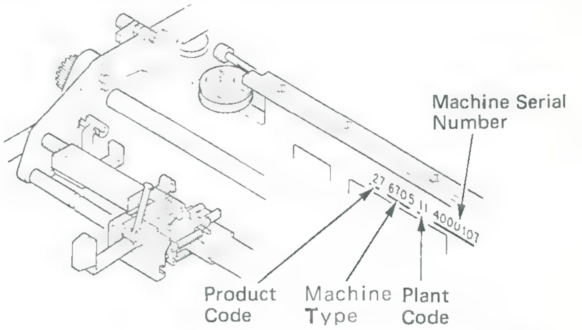


Figure 1

MODEL	MACHINE TYPE
13" Single Pitch Fabric	6701
13" Single Pitch Non-Correcting	6702
15" Single Pitch Correcting	6703
13" Dual Pitch Correcting	6704
15" Dual Pitch Correcting	6705

(Continued)

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(CEM 422 Continued)

RECOMMENDED PARTS INVENTORY (RPI)

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	333	1303501	Tilt Ring Asm.	1	25.25
	415	1254802	Socket, Lower Ball	1	2.60
05	141	1254495	Brkt. Erase Table	1	.60
10	100	1254997	Margin Pointer	2	.10
	107	1304140	Carrier Pointer D.P.	1	.55
	107	1254690	Carrier Pointer S.P.	1	.40
	119	1303102	Lamp	1	3.10
11	602	1249875	Connector	1	.15
30	141	1254900	Brkt. Erase Table, L. (S.R.)	1	1.05
	166	1254899	Brkt. Erase Table, R. (S.R.)	1	1.05

The "Selectric" Adjustment Parts Manual (F/N 241-5939) should be used with the "Selectric" Service Manual Supplement (F/N 241-6176) to service the "Selectric" III Typewriter.

Call reporting information for the "Selectric" III is the same as for "Selectric" and "Selectric" II Typewriters. This information is found in the CEARS Handbook (F/N Z241-6286).

423 SAFETY

5-7-80

Type(s): 6701, 6702, 6703, 6704, 6705 (Revised) 12-17-80

SUBJECT: Transformer Housing And Line Cord Plate — Wire Tie

PURPOSE: Early level dual pitch machines have a wire tie (11-606) to hold the line cord plate (11-600) and transformer housing (11-601) in place during shipment. If it is necessary to remove the wire tie to service the machine, the wire tie need not be replaced. However, if the transformer housing has a **BLACK** line cord plate (11-600), it **MUST** be replaced with a **GRAY** line cord plate (11-600) which has additional lugs to hold it in place.

Newer level machines have the **GRAY** line cord plate.

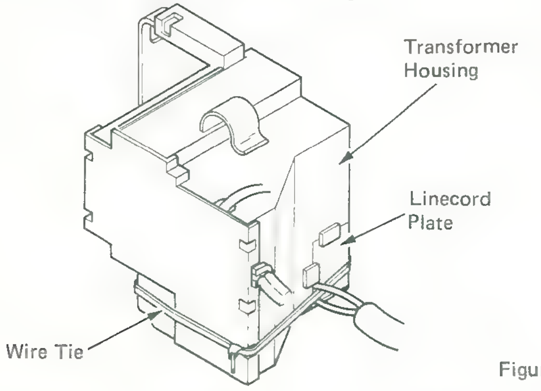


Figure 1

MECH/REF.		PART NO.	DESCRIPTION	QTY.	PRICE
11	600	1304051	Line Cord Plate, Gray	1	.20

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hrs.

Use Service Code 33

This CEM Expires 9-10-81

424 SERVICE INFORMATION

5-21-80 (Revised) 12-17-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Paper Bail Arm Screws — Redesigned

Self-locking material has been added to the threads of the paper bail arm screws (22-02) (Figure 1). This will prevent loosening of the screws.

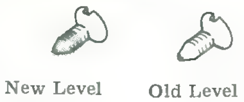


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
22	2	1256661	Screw	1	.05

425 SERVICE INFORMATION

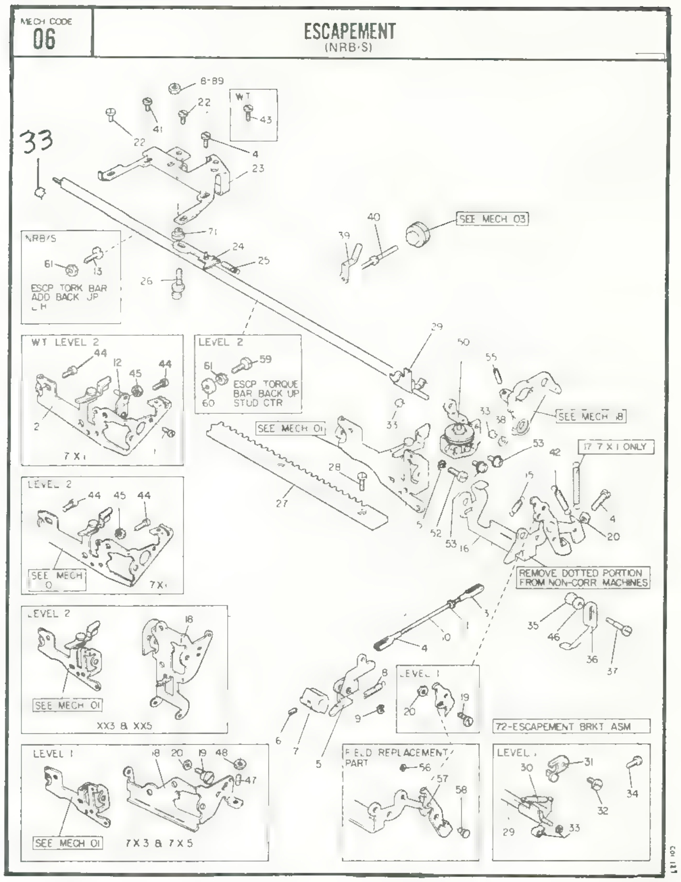
6-18-80

Type(s): 6121, 6126

SUBJECT: APM Correction — Escapement Torque Bar Retainer Clip

The left-hand escapement torque bar retainer clip (06-33) is not shown in the APM (241-5939).

Mark this change in your APM.



426 SERVICE INFORMATION

6-18-80 (Revised) 12-17-80

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Backspace Driver Mounting Stud — B/M

Backspace failures due to a broken driver mounting stud may be corrected using the backspace driver mounting stud B/M.

INSTALLATION PROCEDURE

1. Remove driver mounting stud from backplate by tapping lightly.
2. Remove the "C" clip, washer, driver, pitch cam (disconnect pitch cable), and pitch cam spring from the stud.
3. Insert the new stud (24-155) in the pitch cam spring, pitch cam (connect pitch cable) and driver.
4. Install washer and "C" clip on the front of the stud.
5. Install stud through the hole in the backplate and secure with washer and nut (Figure 1).

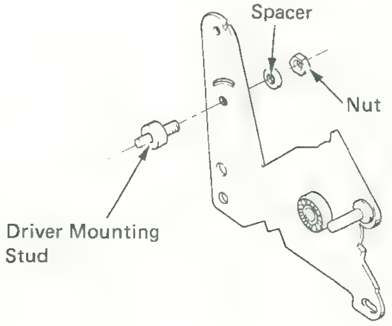


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
24	154	1279024	Stud B/M (Contains Ref. 155, 156 And 157)	1	2.85
	155	1279023	Stud	1	2.50
	156	1142264	Nut	1	.10
	157	257984	Washer	1	.04

CEM Customer Engineering Memorandum

"Selectric" Typewriter

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427 SERVICE INFORMATION

6-18-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Stroke Counters – SER Only

New install stroke counter B/Ms are available **only** by submitting an SER with DCO attached. All necessary parts and installation instructions will be included in the SER. Replacement parts for existing counters will remain available. Installation instructions and hardware for the stroke counter on machines with new style check pawl are included.

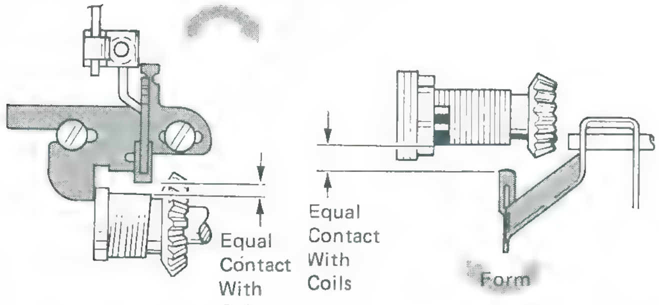
428 SERVICE INFORMATION

7-2-80
(Revised) 12-17-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Carrier Return – Uneven/Slow/Intermittent

SYMPTOM: Uneven or slow carrier return can be caused by failure of the carrier return shoe (03-502) to **fully engage** each of the last 2 to 3 coils on the right side of the pinion spring (25-13) (Figure 1).



(Level 1) *(Level 2)* Figure 1

If the shoe is tilted to either side, so that greater pressure is applied to a single spring coil, increased wear will result on both the spring and on the return pinion (25-14) at that point. This leads to rapid loss of adjustment and need for aparts replacement more often. It is important that the shoe NOT apply greater pressure to the inside coils as this prevents the remaining outside coils from driving.

SOLUTION: If experiencing this problem, or when replacing parts in this area, check to ensure that the return shoe engages the coils of the return pinion spring evenly. When making the shoe overlap adjustment, be sure the shoe is not tilted and that shoe overlap does not exceed 3 coils. Best results will be achieved with 2 to 2 1/2 coil overlap.

429 RELIABILITY

7-2-80
(Revised) 12-17-80

Type(s): 6126

SUBJECT: Weak Cycle Clutch Drive/Contaminated Lubricant

PURPOSE: On some Correcting "Selectric" II Model 895s the cycle clutch lubricant may have metal contamination.

SYMPTOM: The contamination wears both the cycle clutch spring and cycle clutch pulley arbor, causing the clutch to slip.

SOLUTION: If experiencing weak cycle clutch drive and normal adjustments are not effective, do the following procedure:

1. Remove cycle shaft assembly and disassemble cycle clutch.
2. Thoroughly remove **all traces** of lubricant from cycle shaft assembly and cycle clutch pulley hub.
3. Install new cycle clutch spring, lubricate, and adjust.

Note: This procedure is effective in most cases. Do not replace the cycle clutch pulley hub unless these steps fail to correct the problem.

MACHINES AFFECTED: Between approx. S/N: Type 6126 (Model 895) – 4765000 to 4874000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .5 Hr.

Use Service Code 33

This CEM Expires 6-1-81

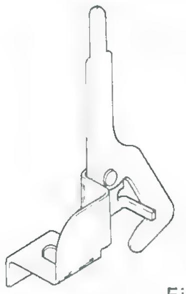
430 SERVICE INFORMATION

7-2-80

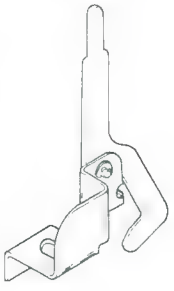
Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Center Cover Bracket – Redesigned

The center cover latch bracket (05-43, 05-18) has been redesigned so that the latch lever (05-44, 05-16) can be installed to the inside of the bracket (Figure 1). This change gives more clearance between the lever and the foam, and makes it easier to unlatch the covers.

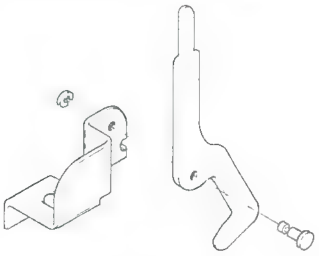


New Level Figure 1



Old Level Figure 2

Until the new bracket is available, manufacturing is using the old level parts (Figure 2) and reversing the lever (Figure 3). This method can also be used in the field if desired.



Modified Old Level Figure 3

431 SERVICE INFORMATION

7-2-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Multiplying Lever Mounting Stud B/M

The multiplying lever is not included in B/M 25-324. This lever can be ordered under 25-250. Mark this reference number in your APM (25-250) and add the reference number and P/N to your PN/PL.

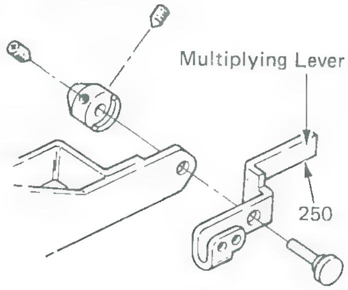


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	250	1128016	Multiplying Lever	1	.10

432 SERVICE INFORMATION

7-2-80

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: PN/PL Correction

The fan (11-400) (sound reduction machines only) should be P/N 1205958. Mark this change in your PN/PL.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
11	400	1205958	Fan, Sound Reduction Machines Only	1	1.40

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433 SERVICE INFORMATION

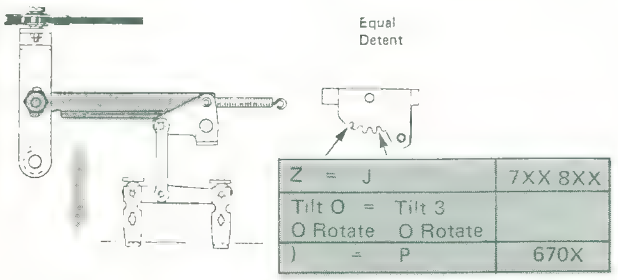
7-30-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: APM (F/N 241-5939) Correction

The shaded areas in the frames (64 and 81) below are corrections that should be marked in your APM.

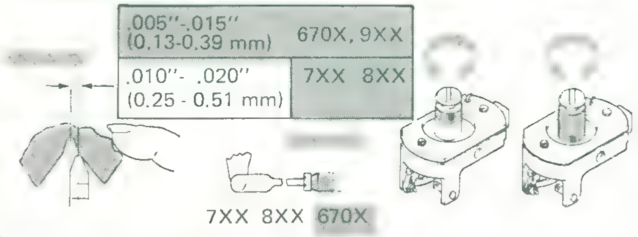
64 Tilt Arm Motion (23-28)



Z = J	7XX 8XX
Tilt 0 = Tilt 3 0 Rotate 0 Rotate	
) = P	670X

81 Typehead Homing (Final) (02-420) **(02-441)**

.005"-.015" (0.13-0.39 mm)	670X, 9XX
.010"- .020" (0.25 - 0.51 mm)	7XX 8XX



Upper Case	
Tilt 2 Zero Rotate	"Degree" 7XX 8XX
	"R" 670X

434 SERVICE INFORMATION

9-10-80
(Revised) 12-17-80

Type(s): 6121 (Model 7X3), 6126 (Model 8X3), 6701, 6702, 6704

SUBJECT: Operational Shaft Support (Lost Index Motion)

PURPOSE: To reduce operational shaft flex, and improve reliability of the index mechanism on applications such as continuous multiple copy forms, pin feed, and 45/48 tooth OCR.

SOLUTION: Install the operational shaft support B/M using the following method:

1. Attach the drilling templete (Figure 1A) to the machine frame as shown in Figure 1B. Drill the two holes with a No. 22 drill bit (P/N 450265) and remove template.

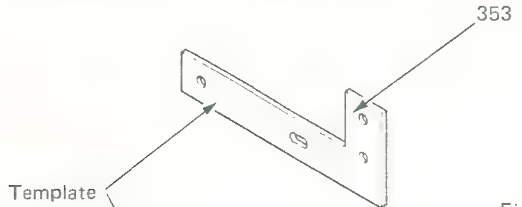
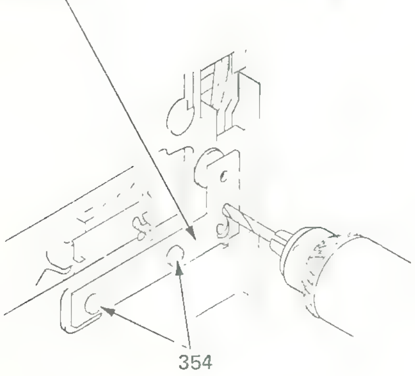


Figure 1A



Bottom View

Figure 1B

2. Assemble and install the operational shaft support bracket asm. as shown below (Figure 2A & B).

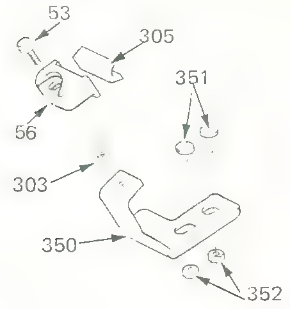


Figure 2A

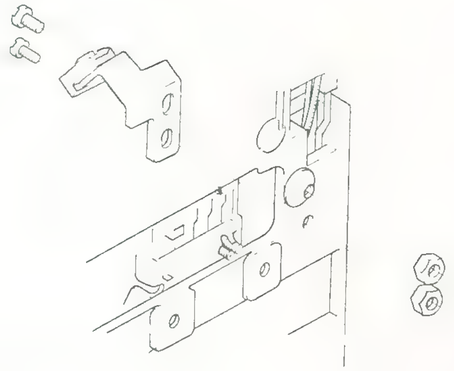


Figure 2B

3. Position the operational support bracket front-to-rear so the front of the bracket evenly contacts the power frame as shown in APM, frame 118.

4. Perform adjustment APM, frame 119.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	356	1279494	Operational Shaft Support B/M (Includes 25-53, 56, 303, 305, 350, 351, 352)	1	—
	53	1128326	Screw — Support Mounting	1	.03
	56	1159843	Bearing Support	1	.65
	303	56722	Lock Washer — Support Mounting	1	PP08
	305	1287910	Operational Shaft Support Bearing	1	.35
	350	1279492	Operational Shaft Support Bracket	1	--
	351	35739	Screw — Support Bracket Mounting	2	—
	352	257187	Nut — Support Bracket Mounting	2	PP13
	353	1279491	Drilling Template	1	—
	354	438566	Screws, Template Mounting	2	PP15

NOTE: Order reference 353 as necessary.

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435 RELIABILITY

9-10-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Fabric Ribbon Reverse Failures

PURPOSE: Some replacement ribbon plates may have a bind in the area of the stud and the fork in the plate (Figure 1).

SYMPTOM: Ribbon fails to reverse.

SOLUTION: Check for binds in the area shown in Figure 1. Also check new assemblies before installing. If a bind is found on a new assembly return as a new defective part per General Administrative CEM No. 35.

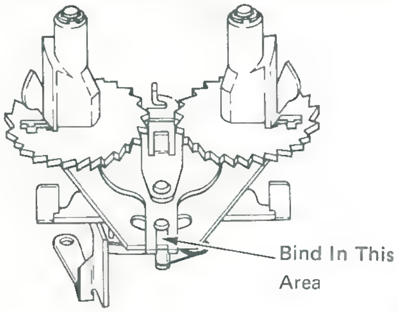


Figure 1

436 RELIABILITY

9-10-80
(Revised) 12-17-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Motor Pawl Assembly – Washer Added

Some machines have nylon washers added to the motor pawl assembly (Figure 1). If experiencing start problems, check for a bind between the washer and the pawls. To eliminate the bind, remove the washers.

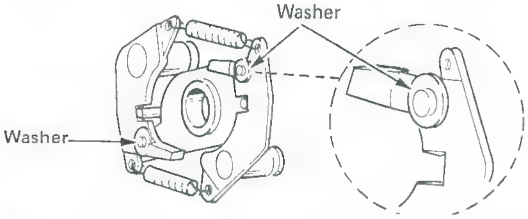


Figure 1

MACHINES AFFECTED: Approx. S/N: Type 6121 (7X1) 0885914 — 0907710; Type 6126 (8X3) 5200758 — 5250192; Type 6126 (8X5) 6603755 — 6730476; Type 6701, 0000001 — 0000095; Type 6702, 1000001 — 1003567; Type 6703, 2000001 — 2004383; Type 6704, 3000001 — 3000761; Type 6705, 4000001 — 4038927.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Service Code 33

437 SERVICE INFORMATION

9-10-80

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: Transformer Replacement – Wire Routing

There is a possibility of interference between the transformer secondary wires and the gear train. To reduce this possibility when replacing the transformer, the secondary wires should be placed on the outside of the Tab/Set Clear link. Figure 1 shows the correct wire path with the machine in the service position. Some early production machines have a metal clamp to secure the wires. Wire ties may be used if necessary.

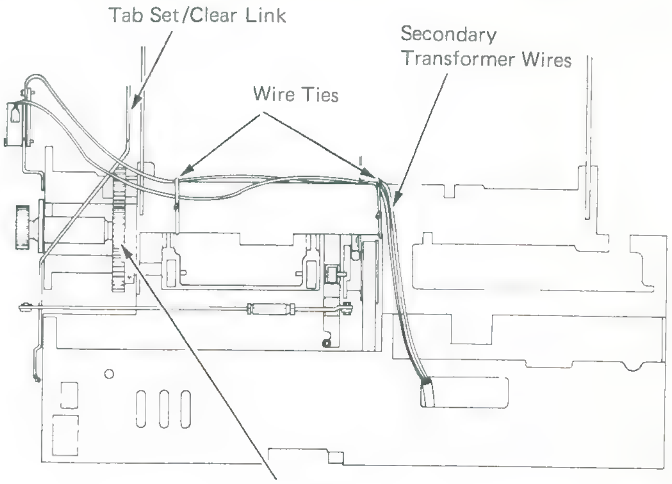


Figure 1

438 SERVICE INFORMATION

9-24-80
(Revised) 10-8-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Upper Idler Gear Bushing – Redesigned

OBSOLETE.

439 SERVICE INFORMATION

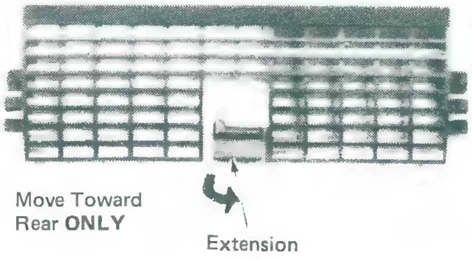
9-24-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Motor Vent Grill Extension – Breakage

Moving the motor vent grill extension too far to the rear or toward the front of the machine may cause it to crack or break. The extension should be moved toward the rear of the machine only far enough to let the linecord in. This extension is required to maintain double insulation.

Note: CSI (F/N 241-5114-2) page 17, item 8, also applies to "Selectric" III typewriters.



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440 SERVICE INFORMATION

9-24-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Cable Guide – Redesigned

The velocity cable guide (02-217) located on the left-hand side of the carrier has been redesigned. The guide is now installed by hooking it over the carrier casting instead of it being held in place by the retainer (02-49) (Figure 1).

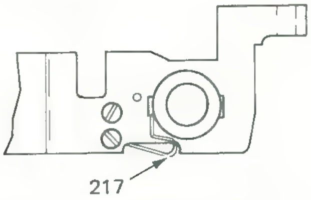


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY	PRICE
02	217	1141637	Cable, Guide	1	.05

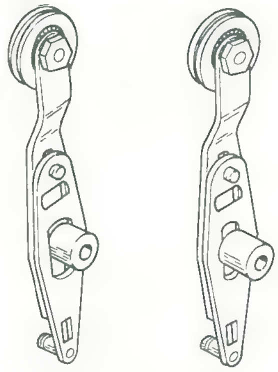
441 SERVICE INFORMATION

11-5-80

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Two-Piece Rotate Arm – Redesigned

The two-piece rotate arm has been redesigned to interlock the upper and lower rotate arms together (Figure 1). This will prevent the parts from spreading during a print operation.



Old New

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	514	1147196	Two-Piece Rotate Arm Asm.	1	2.75

Parts Information: The individual parts (upper and lower arm) will no longer be available. The old style two-piece arm will be used until depleted.

442 SERVICE INFORMATION

11-5-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Homing Changes – Rotate Tape Replacement

PURPOSE: Reduce rotate homing adjustment change (drift) after rotate tape replacement.

SYMPTOM: Rotate homing adjustment changes (drifts) within a short time after replacement of a rotate tape. This can occur if the rotate tape is not fully seated, i.e., pulled tight, around the rotate pulley. Normal use causes the tape to seat properly, and the homing adjustment changes. This symptom is sometimes incorrectly referred to as "tape stretch."

SOLUTION: After replacement of the rotate tape and completion of the rotate adjustments, type several lines of repeat underscores. Then check and make the typehead homing adjustment as required.

Note: Machine damage can occur from operating the repeat underscore before making correct rotate adjustments, as well as from operating the print mechanism without the platen and element in place.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

443 SERVICE INFORMATION

11-5-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Tilt Rings – Assembled Incorrectly

There is a possibility of tilt rings (02-333, 335) assembled with incorrect tilt ring bases (02-300). 96 character and 88 character tilt ring bases are not interchangeable. There is a difference in the angle and position of the tilt detent teeth.

If experiencing vertical alignment problems, check the tilt ring base. 96 character tilt ring bases have a small notch to the rear of the zero tilt tooth, (Figure 1). 88 character tilt ring bases have no notch in this location.

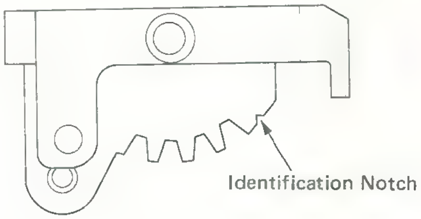


Figure 1

NOTE: Early production 96 character tilt ring bases have a black oxide finish, as do the 88 character bases. Current production 96 character bases are copper colored to aid in identification and elimination of the asm. problem.

If this condition is encountered, replace the tilt ring.

Check field stock of tilt rings, and return any which are incorrectly assembled as NEW DEFECTIVE.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Applicable Service Code

444 SERVICE INFORMATION

11-5-80

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: Custom Keybuttons

The blanket part number for custom keybuttons for "Selectric" III is P/N 1302800.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

445 SERVICE INFORMATION

11-5-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Rotate Bellcrank Stud – Installation

The rotate bellcrank stud (23-483) now press/fits into the power frame. Install the stud through bellcrank (23-220), differential bracket (23-485), spacer (23-487) and power frame. Start nut (23-102) on the stud threads and tighten the nut until the stud bottoms against the power frame.

446 SERVICE INFORMATION

12-17-80

Type(s): 6121, 6122, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Replacing Broken Selector Latch Links

The solenoid selection cables (24-353 Mag Card APM F/N 241-5584) used on the Mag Card can be used to replace broken selector latch links (21-316) on the "Selectric" typewriter without removing the motor:

1. Remove the clevis from the selector latch link.
2. Remove the link by breaking it with duck bill pliers or other suitable tool.
3. Install solenoid selection cable (24-353 Mag Card) through hole in selector latch and attach clevis.
4. Attach clevis to selector interposer and adjust.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
21	316	1460846	Cable		1.45
24	353	1460846	Cable (Mag Card)		1.45

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .3 Hr.

Use Applicable Service Code

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447 SERVICE INFORMATION

12-17-80

Type(s): 6121, 6126, 670X (A-Frame Only)

SUBJECT: Pinfeed Platen Support B/M

PURPOSE: A pinfeed platen support B/M (49-50) is now available to reduce movement of the pinfeed platen caused by typehead impact. (Max. pin to pin approx. x5, 10" — x3, 9 1/2" — x1, 6")

SYMPTOM: Smeared characters.

SOLUTION: Install the support B/M (49-50) on the right side of the platen (Figure 1) as described below:

1. Remove platen asm. and deflector.
2. Remove LH platen knob, LH platen bushing, pinwheels and core.
3. Assemble support bracket asm. (49-01, 40, 103, 47, 44, and 43) as shown.
4. Install the support bracket asm. on the platen shaft as shown. Do not tighten screws (49-47 and 01).
5. Install the pinwheels, core, LH platen bushing and LH platen knob; tighten only the platen knob screws.
6. Hold the support bracket asm. up in a vertical position while installing the platen.
7. Position the pinwheels and core as far to the left as possible and tighten the pinwheel setscrews.
8. Remove platen asm. and center cover.
9. Install the base (49-45) and guide spring (49-41) on the front of the A-Frame in the slot as shown. Attach with clamp (49-42) and screw (49-46) as shown. Leave screw (49-46) loose at this time. **Note:** End of guide spring with hole should be between the base and A-Frame.
10. Guide the support bracket (49-43) under the extension of the support base (49-45) while installing the platen asm.
11. Slide support base asm. and support bracket asm. as close to the RH pinwheel asm. as possible.
12. Hold the support base (49-45) down against the paper release rod (22-269). Position the spring (49-41) so the support bracket (49-43) will slide under the extension of the support base (49-45) without bending the spring (49-41). Then tighten the screw (49-46).
13. Hold the support bracket (49-43) so that the extensions touch each side of the support base (49-45) while tightening the bushing screws (49-1).
14. Hold the support bracket (49-43) to the rear (both extensions touching the support base) while tightening the screw (49-47).
15. Remove the platen.
16. Install center cover and deflector.
17. Guide the support bracket (49-43) between the deflector and the center cover while installing the platen.

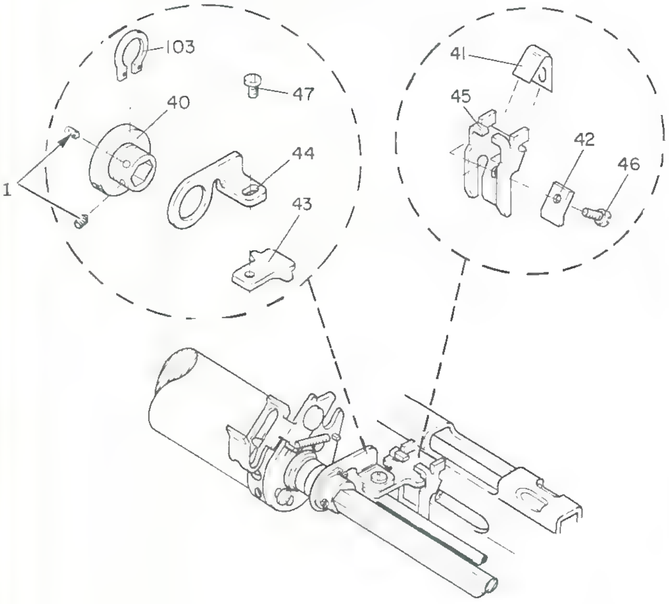

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
49	1	1175101	Screw	2	PP01
	40	1256673	Bushing	1	2.00
	41	1256674	Guide Spring	1	.75
	42	1256675	Clamp	1	.65
	43	1256676	Support Bracket	1	1.10
	44	1256677	Support	1	1.05
	45	1256678	Support Base	1	2.65
	46	0038351	Screw	1	.08
	47	1117759	Screw, Support	1	PP14
	50	1256679	Support B/M	1	—

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: 1 Hr.

Use Applicable Service Code

448 SERVICE INFORMATION

12-17-80

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Stop – Selector Cam Lever Mounting Bracket – "A" Frame With Double Index

A positive stop has been released to prevent accidental bending of the selector cam lever mounting bracket (20-327) on machines with the double index mechanism. A bent mounting bracket can result in line space failures. On double index machines, the line space lever is in the center of the cover slot in its extreme rear position. With the stop installed the lever cannot be forced to the rear of the slot. Install the stop as illustrated in Figure 1.

This part is for field use only.
Install as required.

ADJUSTMENTS: Form stop so that it just contacts the index lever in the rear detent position.

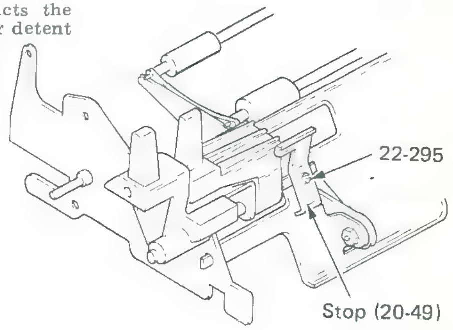

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
20	49	1256686	Stop	1	5.00

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Applicable Service Code

TIP TIMELY INFORMATION PROGRAM

12-17-80

Type(s): 6701, 6702, 6703, 6704, 6705

SUBJECT: Paper Table Mounting Brackets

Use the proper mechanism code when ordering cover parts. Non-sound reduction is mechanism 05. Sound reduction is mechanism 30.

CAUTION: The paper table mounting brackets will break if over-tightened.

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TIMELY INFORMATION PROGRAM 12-17-80

SUBJECT: CEM Format Changes

The CEM format has been revised to be compatible with the CEARS program. These changes are:

- *Whenever possible, Red Tag Parts will be identified by the term "(Red Tag)" at the beginning of the description column.*
- *A dash (—) will be used in the price column when a part price is not available at print.*
- *Model(s) have been replaced by Type(s). Models will continue to be used when further identification is needed.*

MACHINE TYPE LISTING

Equipment Description	*Machine Type*
"Selectric" I (All Models)	*6121*
"Selectric" I/O	*6122*
"Selectric" II (All Models)	*6126*
"Selectric" III	
13" S.P. Fabric Ribbon	*6701*
13" S.P. Non-Cor. Ribbon	*6702*
15" S.P. Correcting	*6703*
13" D.P. Correcting	*6704*
15" D.P. Correcting	*6705*

TIMELY INFORMATION PROGRAM 12-17-80

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Paper Table Foam

Replacement of the foam strip (04-60, 159) on the underside of the paper table (05-56, 30-139) will correct a squeaking noise caused by the metal surface of the paper table contacting the platen. Position the foam approximately .010"-.045" (0.25-1.14 mm) from the front edge of the paper table. The foam strip (05-60, 159) may be used for "Selectric" III sound reduction paper tables (30-139).

TIMELY INFORMATION PROGRAM 11-5-80

Type(s): 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Ribbon Feed Failures — Wear Of Spiked Driver Gear

Ribbon feed failures due to worn spiked driver gear (or ribbon feed gear) can result from interference between the spiked driver (15-57) and the tilt pulley spring anchor bracket (02-327). Check for adequate clearance with the impression control at stick 5 and the spiked driver positioned at its nearest point to the bracket. Reposition or form the bracket as necessary to provide clearance.

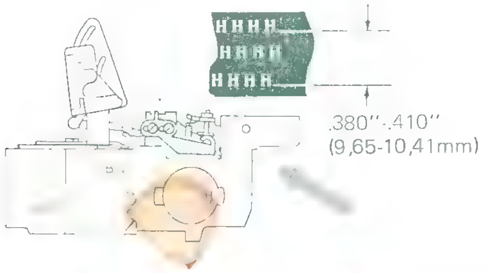
NOTE. Check powered flight adjustment. Increasing powered flight beyond specified adjustment range increases exposure to interference and may result in intermittent impression variations as well as damage to the spiked driver gears.

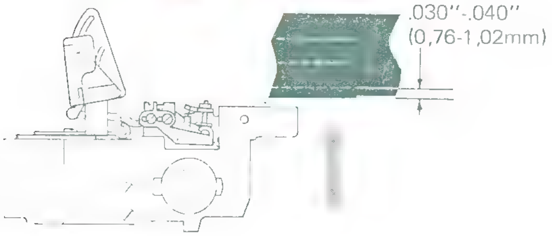
THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

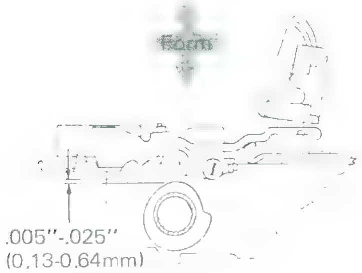
(CEM No. 375 Continued)

3. Spread Adjusting Plate (15-22) And Lift Height (15-30) — Adjust ribbon spread to low side of spec. .380" (9,65mm) and lift to high side of spec. .040" (1,02mm). This provides minimum lift motion required to ensure each character strikes an unused section of the ribbon.

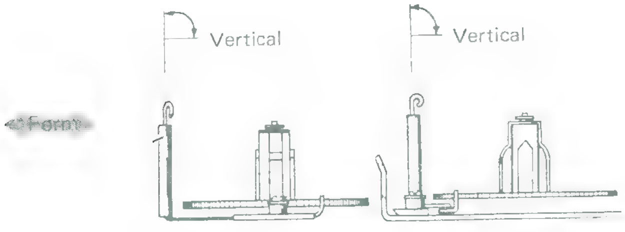




4. Lift Arm Lower Stop (15-2) — Adjust to **high** side of spec. .025" (0,64mm). **Note:** Be sure lowest character does not strike ribbon when in stencil position.

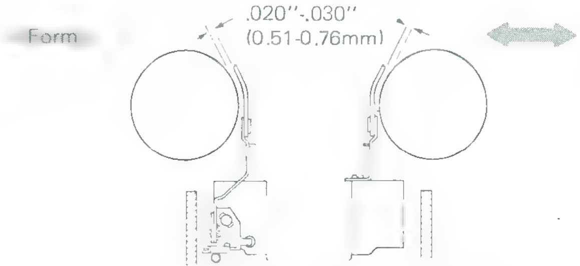


5. Shock Wire (15-83) — The nominal adjustment of the shock wire is vertical. The ribbon should track in the center of the guides during typing. **Form the shock wire slightly to correct any tendency to track away from center.**



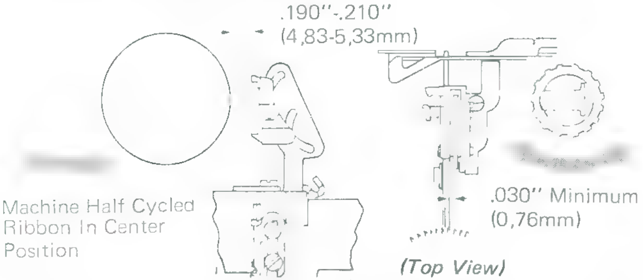
(Left Side View) *(Front View)*

6. Cardholder Bracket (26-42) – Adjust clearance to **low** side of spec. .020" (0,51mm). Do NOT allow the cardholder to touch the paper when using the customer's thickest application. Instruct the operator to use the copy control lever if necessary.



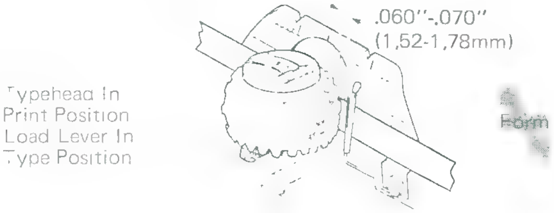
(Left Side View) *(Right Side View)*

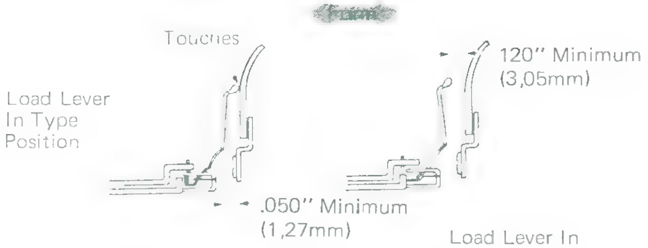
7. Left-Hand Ribbon Lift Guide (26-72) – Adjust so inked side of ribbon does not come in contact with guide or other machine parts. **Note:** Ribbon guides must be parallel. This is a refinement of the ribbon lift guide adjustment.



(Left Side View)

8. Separator Wire Left-To-Right (26-9) – Adjust separator wire to high side of spec. .070" (1,78mm). Check with typing element held against platen to ensure **least possible** contact of ribbon with separator wire during typing.
Note: If separator wire has been malformed, it must be replaced. It is very important that the proper relationship be attained between the platen, cardholder, correcting tape and separator wire.





(Type Position)

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376 SERVICE INFORMATION

11-15-78

Model(s): 7XX-8XX

SUBJECT: Transport Cord Pulley Assemblies — Redesigned

The transport pulleys (03-365, 03-366, 18-130, 19-149) have been changed to molded plastic (Fig. 1). Plastic and steel assemblies are interchangeable. Steel pulleys will remain available until existing stock is depleted. Individual parts for these assemblies will not be available.

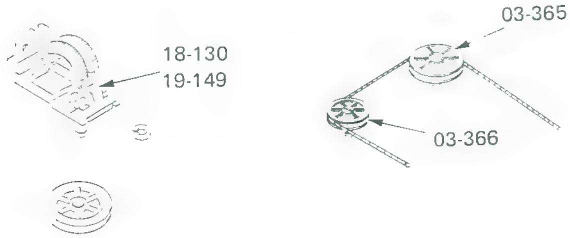


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
03	365	1256075	Pulley Asm., LH Rear — Plastic	1	.40
	366	1256076	Pulley Asm., LH Front — Plastic	1	.40
18	130	1205784	Pulley And Bkt. Asm. — Plastic	1	2.20
19	149	1205784	Pulley And Bkt. Asm. — Plastic	1	2.20

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

377 SERVICE INFORMATION

11-29-78

Model(s): 7XX, 8XX

(Revised) 12-13-78

SUBJECT: Platen Knobs

Level 2 platen knobs (12-55) are now being manufactured with the setscrews in line to reduce possibility of knob loosening. The Level 2 knob can only be used on platens with a flat side on the right shaft (Fig. 1). Level 1 knobs are to be used with Level 1 platens.

NOTE: Use correct part numbers below.

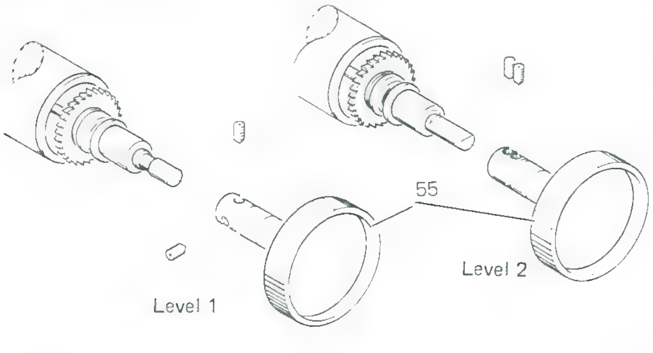


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
12	55	1205427	Knob (In Line Screws), Level 2	1	1.30
	55	1256532	Knob, 90 Degree Screws Level 1	1	*

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

378 SERVICE INFORMATION

1-17-79

Model(s): IBM "Selectric" II

SUBJECT: Motors

Some 115 V 60 Hz motors with a longer shaft on the left hand side have been used in producing "Selectric" II typewriters (Fig. 1). These motors are identical to the standard 115 V 60 Hz double insulated motor except for the longer shaft and a white identification label on the underside of the motor. If replacement is required use the standard motor (11-40).

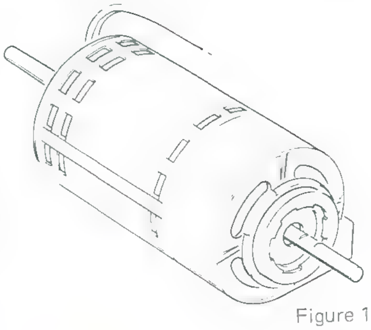


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
11	40	1147420	Motor, 115 V 60 Hz	1	62.25

379 RELIABILITY

1-17-79

Model(s): 7XX, 8XX

SUBJECT: Torque Limiter Hubs — Defective

PURPOSE: Some machines have been manufactured with a defective torque limiter hub (25-003), torque limiter screws (25-004) and/or bad end play adjustments.

SYMPTOMS:

1. Dropped loop on C/R pinion spring.
2. Dropped loop on torque limiter spring.
3. Worn C/R pinion "C" clip groove.
4. C/R pinion "C" clip missing.
5. Unresolved slow carrier return (adjustments appear correct).

SOLUTION: Replace torque limiter hub (25-003), and screws (25-004). Examine and replace other operational shaft parts as necessary.

MACHINES AFFECTED: 721 — 0778890, 0797028; 8X3 — 1989988, 5023017; 8X5 — 3867695, 6068040.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .5 Hr.

Use Service Code 32

This CEM Expires 12-1-79

380 RELIABILITY

1-17-79

Model(s): 8 X 3, 8 X 5

SUBJECT: Keylever Pawl — Defective

SYMPTOM: Broken keylever pawl or intermittent tripping of the interposer due to cracked part.

SOLUTION: Replace keylever (21-105, 106, 107 or 108).

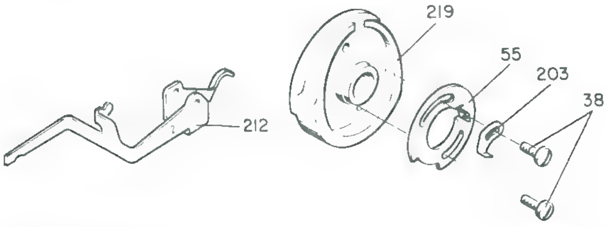
MACHINES AFFECTED: 8 X 3 — 5012751-5033724; 8 X 5 — 6036881-6104433.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32

This CEM Expires 11-22-79

(CEM 273 Continued 11-20-74)



PARTS REQUIRED:

MECH/REF'		PART NO.	DESCRIPTION	QTY.	PRICE
16	26	1124773	Damper	1	.02
	38	1164582	Screw	2	PP12
	55	1205814	Plate, L-2	1	.10
	63	1132287	Spring, Shift Clutch	1	.55
	64	1174439	Ratchet	1	.85
	203	1203728	Stop, Overthrow, L-2	1	.15
	206	1174431	Arbor	1	1.25
	208	1174311	Brake	1	.30
	210	1175325	Stud	1	.25
	211	1174230	Sleeve, Damper	1	.03
	212	1206796	Detent Asm., L-2	1	.55
	216	1174187	Spring	1	.05
	218	1205820	Bracket	1	.20
	219	1205813	Cam, Shift, Steel, L-2	1	3.25
	220	1287308	B/M Steel Shift Cam Conversion, Contains The Above Parts	1	7.05

Plant installed above approx. S/N 8X3-1375000, 8X5-2548000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

This CEM expired 1-15-75

274 SERVICE INFORMATION

11-20-74

Model 7X1

COVER BILL OF MATERIALS–OBSOLETED–7X1

All metal 7X1 cover B/Ms (04-304) are being obsoleted. The current level polyester cover B/M will be used in its place.

When changing to the polyester B/M, the margin levers (09-15) and pointer bracket (09-001) must also be replaced.

CAUTION: This change applies only to the Bill of Material. Individual cover components are not interchangeable between metal and polyester.

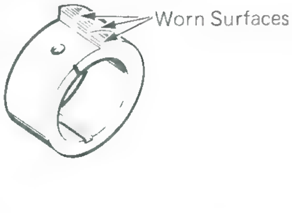
275 RELIABILITY

12-4-74
(Revised) 1-15-75

Models 8XX

RIBBON LIFT AND TRACKING FAILURES

Some "Selectric" II Typewriters may have reached the field with a soft ribbon lift cam (15-17), P/N 1206694, (26-56), P/N 1206058.



When experiencing ribbon lift or tracking failures, examine the lobes of the cam for extreme wear. Replace the cam if necessary.

The failure is more evident when using film or correctable film ribbons as the characters overlap between lift positions, leaving voided copy.

See frame 265 in "Selectric" APM for proper alignment of cam to print sleeve flat.

MACHINES AFFECTED: Between approx. 8X3 S/N 1360700 & 1379210, 8X5 S/N 2522440 & 2553838.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

This CEM expired 12-1-75

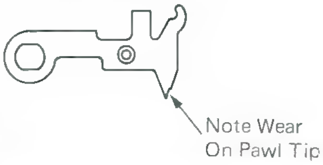
276 RELIABILITY

12-4-74

Models 7XX, 8XX

ESCAPEMENT – SINGLE PITCH – SKIPPING

When experiencing skipping during escapement or tab functions, check the tip of the escapement pawl (06-24), P/N 1128201 for wear.



If wear is found, the escapement pawl and escapement rack (06-27) must be replaced. See catalog for proper rack part number.

Rapid wear of the new pawl will occur if used with the existing escapement rack.

MACHINES AFFECTED: Between approx. 7X1 0239825-0246755; 7X3 0434767-0442579; 7X5 0333312-0340817; 8X3 1353100-1379136; 8X5 2521440-2553830.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

This CEM expired 12-1-75

277 RELIABILITY

1-15-75
(Revised) 5-7-75

Models 7XX, 8XX

SUBJECT: Keyboard Touch – "Selectric" Typewriters

PURPOSE: Some machines may have reached the field with oversized compensator tubes.

SYMPTOM: A hesitation when a keylever is depressed. This can be detected by alternately depressing position zero and forty-three keylevers. A noticeable hesitation of either keylever indicates a probable oversized compensator tube.

SOLUTION: Tilt machine on its back, loosen the right-end plug and latch out position forty-three interposer. Pushing the end plug snugly against the balls, depress the H keylever until position forty-three interposer flexes slightly to the right and tighten the end plug. Repeat this procedure for the left side of the keyboard using position zero interposer and H keylever. If the hesitation is still detected after these adjustments, replace the keyboard (21-100).

MACHINES AFFECTED: Between approx. 7X1, S/N 242900 and 246000, 7X3, S/N 432900 and 442000, 7X5, S/N 331600 and 339900, 8X3, S/N 1356550 and 1377150, 8X5, S/N 2515400 and 2550600.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use code 12 during warranty and code 32 after warranty,

This CEM expires 4-1-76

278 SERVICE INFORMATION

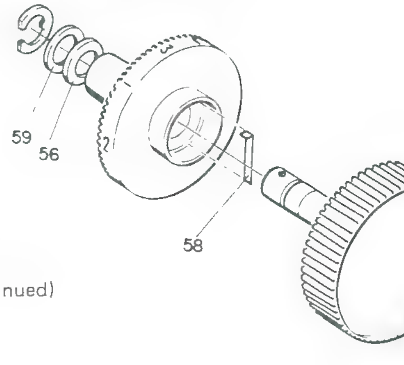
3-12-75

Models 7XX, 8XX

SUBJECT: Page End Indicator – New – Bias Spring

PURPOSE: An internal leaf spring has been added to facilitate a more reliable bias on the page end indicator.

SYMPTOM: If experiencing a loose indicator, it is possible to form (bow) the existing ring spring (12-51). Remove the ring spring and install the new spring (12-58) if additional bias is necessary. This new spring requires an additional washer (12-59) between C-clip and existing washer (12-56) (Figure 1).



(Continued)

Figure 1

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PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
12	58	1206499	Spring	.02
	59	1206791	Washer	.02
	56	1175871	Washer	.04

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

279 SERVICE INFORMATION

Models 7XX, 8XX

3-12-75
(Revised) 2-28-79

SUBJECT: Paper Bail Arm Springs—Stronger

OBSOLETE. Refer to CEM No. 359.

280 SERVICE INFORMATION

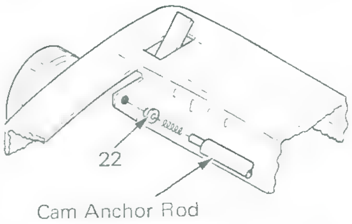
Model 7X1

3-12-75

SUBJECT: Pinfeed Platen Bushing – 7X1 With Polyester Covers

PURPOSE: When installing pinfeed platen on 7X1 machines with polyester covers, pressure fit bushing **(49-22)** must be inserted in the cam anchor rod mounting holes.

Note: Support cover lip when installing bushing to prevent breakage.



PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
49	22	1206858	Bushing	2	.03

MACHINES AFFECTED: All 7X1 with polyester covers.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

281 SERVICE INFORMATION

Models 7XX 8XX

3-12-75

SUBJECT: TYPE ELEMENT – NEW – ATHABASCAN

PURPOSE: Athabascan is a family of languages used by the Navajo, Apache, Hupa, Sarsi, Tlinget Indians, and some Eskimo dialects.

The Athabascan element uses the English alphabet augmented by five special symbols and may be used on standard keyboards. A keyboard is available that displays these special characters and diacritical marks. It utilizes a "dead key" (not field installable) which enables the typist to insert special symbols without backspacing.

TYPE STYLE	PITCH	PART NUMBER	DESCRIPTION
Courier 12	12	1167217	Athabascan
Courier 72	10	1167218	Athabascan

Keybuttons to match are available as follows:

SYMBOL	POSITION	ACCENT GRAY	CHAR. GRAY
’ over ,	32	1133247	1197452
: over .	36	1133016	1179065
‚over ’	38	1259134	1259135
L over l	41	1259481	1259482

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

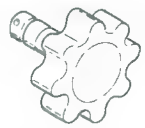
282 SERVICE INFORMATION

Models 7XX, 8XX

3-12-75

SUBJECT: PLATEN KNOB – NEW – HANDICAPPED OPERATORS

PURPOSE: To help operators who have difficulty gripping and turning present round knob.



PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
12	1	1287865	Handicap Platen Knob	*

Note: Available in black only after a limited initial quanity of charcoal gray.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

283 RELIABILITY

Models 7XX, 8XX

3-12-75
(Revised) 7-28-76

OPERATIONAL CAM FOLLOWER ROLLER – WEAR

Note: See "Selectric" CEM No. 319 for current information.

284 SERVICE INFORMATION

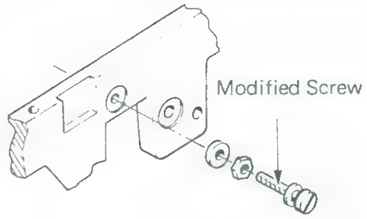
Model 8XX

3-12-75

TORQUE BAR BACKUP SCREW – CENTER – MODIFIED –

A number of "Selectric" IIs were sent to the field with a modified center torque bar backup screw. If adjustment of this screw is needed, replace it with the screw P/N 1205771.

It will also be necessary to install the torque bar backstop, P/N 1175198. Install the backstop with the tab portion orientated to eleven o'clock and adjust using the A/PM.



285 SERVICE INFORMATION

Model 8XX

4-9-75

LIFT-OFF TAPES – LIFT-OFF AND FEED FAILURES

Some lift-off tapes have a coating on the adhesive surface that produces a partial or gray imaged lift-off. These tapes should be replaced.

Some lift-off tapes may not feed the first portion of the tape due to the spiked driver not engaging the take-up spool. This can be corrected by winding the spool two to three extra revolutions.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use service code 15.

When experiencing problems that cannot be corrected by adjustments and supplies or the application is suspect, submit a Supply Inquiry Request (Form No. 140-0108) with applications samples, supplies and other related materials as required.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
25	202	1164537	Cam Follower (S/B) (Single Pitch)	1.15
	202	1204971	Cam Follower (S/B) (Dual Pitch)	1.00
	204	1128015	Cam Follower (C/R) (Single Pitch)	1.35
	204	1204993	Cam Follower (C/R) (Dual Pitch)	1.45

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

Estimated Installation Time 1.0 hrs.

Use Applicable Service Code

PARTS INFORMATION: Scrap all existing stock without blue dot.

302 SERVICE INFORMATION

11-5-75

Models 7XX, 8XX

SUBJECT: Backspace Cam Follower — Single Pitch — Redesigned

PURPOSE: To provide a stronger backspace on single pitch machines, the side frames of the backspace cam follower have been redesigned (Figure 1).

SYMPTOM: The backspace mechanism may allow enough flexing of its components to cause loss of motion to the backspace rack, resulting in a stuttering or unreliable backspace operation.

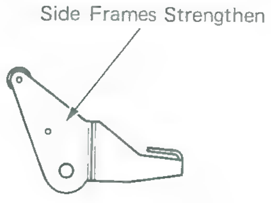


Figure 1

SOLUTION: Install the new backspace cam follower with stronger side frames (25-202).

ADJUSTMENTS: Remain the same.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
25	202	1164537	Cam Follower	1.15

MACHINES AFFECTED: Plant installed above approx. 7X1-304000, 8X3-1520000 and 8X5-2825000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

PARTS INFORMATION : Scrap existing stock and reorder. Part number remains the same.

303 SERVICE INFORMATION

11-19-75

Model 7XX

LOGOS

The "Selectric" I Typewriter logo is being changed from the present black, white and blue to silver and black. Existing stock will be used until depleted.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
04	53	1133556	Logo	.25
	03	1231178	Logo	.10

304 SERVICE INFORMATION

11-19-75
(Revised) 9-8-76

Model 8XX

PRINT QUALITY

SYMPTOM: Extraneous inking and/or fill-in using correctable film ribbon.

PURPOSE: This condition can be minimized by making the following checks and adjustments:

a. Check the application! Best results are attained using a 16—20 lb. smooth finish original with less than three copies.

b. ADJUSTMENTS:

1. Platen front-to-rear (Fig. 1).

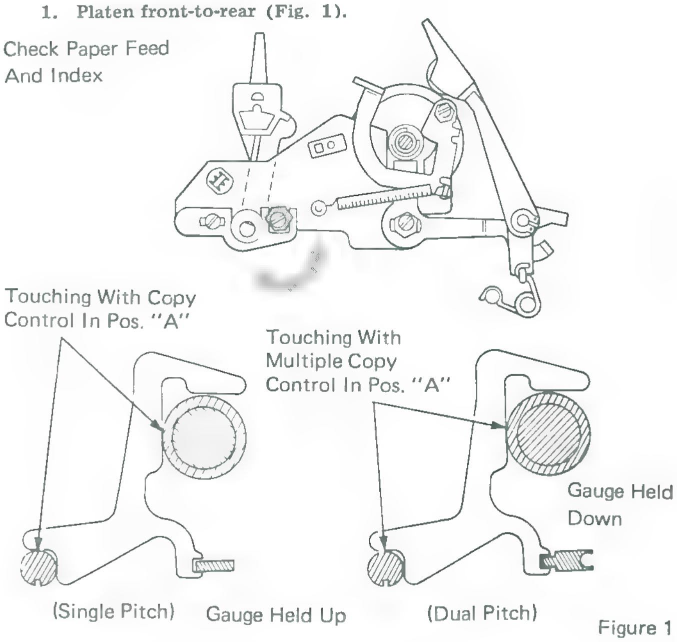


Figure 1

2. Platen height — even top and bottom
3. All rotate and tilt homing adjustments
4. Rocker shaft end play (Fig. 2).

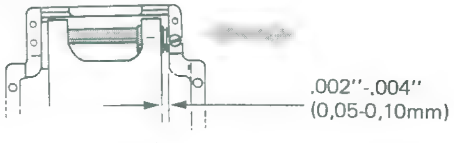


Figure 2

5. Rotate and tilt detents — minimum side play, no binds
6. Cardholder: (Note — These clearances should only be used to correct machines experiencing fill-in with the correctable film. The previous adjustment applies to all other machines (Fig. 3).

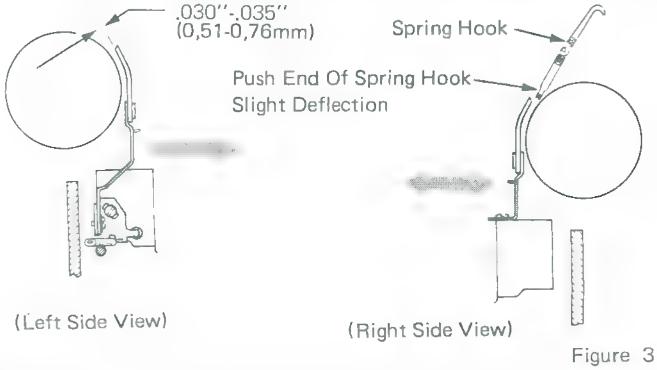


Figure 3

Note: Ensure cardholder is .030"-.035" at writing line.

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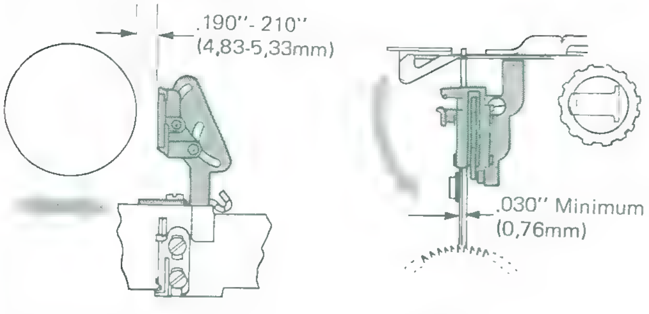
7. LH ribbon lift guide (Fig. 4).



(Left Side View)

(Top View)

Figure 4

8. Escapement timing — escapes just after print

c. Install a 6-2-78 or later date code ribbon.

d. If the application is not recommended for use with the correctable film ribbon, and the above adjustments do not produce satisfactory results, suggest Tech III cover-up.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

Use Applicable Serv. Code

Note: Contact CE and marketing management if problems exist due to application and the above steps do not produce acceptable quality.

305 RELIABILITY

11-19-75

Models 7XX, 8XX

(Revised) 2-28-79

SUBJECT: Platen Height Adjustment

OBSOLETE. Refer to CEM No. 342.

306 RELIABILITY

12-3-75

Models 7XX, 8XX

(Revised) 4-21-76

SINGLE PITCH TAB LEVER SPACER – BREAKAGE

When encountering a single pitch machine, within the approximate serial number ranges listed below, on which the tab lever hesitates or fails to restore, check the spacer (18-76) that is located between the tab lever (18-88) and the tab trigger (18-91). It may be broken or cracked.

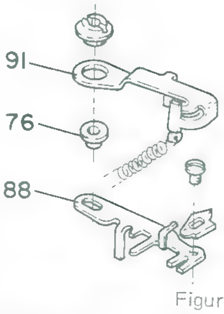


Figure 1

Serial number ranges approx. 7X1-239000-254000, 7X3-434000-448000, 7X5-333000-346000, 8X3-1360000-1391000, 8X5-2521000-2575000.

THE FOLLOWING INFORMATION IBM USE ONLY

Service Code 32

This CEM Expires 10-30-76

307 RELIABILITY

12-3-75

Models 8XX

SUBJECT: Index Transfer Bellcrank Stop Lug — Wear

PURPOSE: Provide a stop lug with a new working surface.

SYMPTOM: The index transfer bellcrank stop lug can wear, causing unwanted index operations during backspace and intermittent index failures.

SOLUTION: Install one metal clip (24-120, P/N 1287925) on the stop lug as shown (Figure 1). Clips can be formed for a more positive fit.

Note: Check that the index transfer bellcrank does not have excessive side play. Add additional bail clips (03-632, P/N 1147155) to hold this adjustment, if necessary.

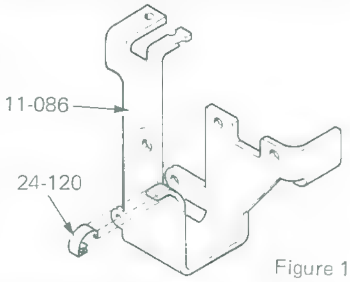
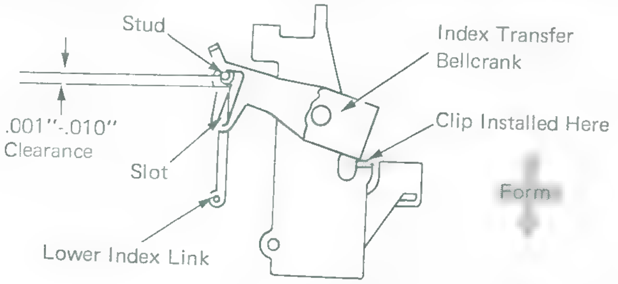


Figure 1

ADJUSTMENTS: Index Transfer Bellcrank Stop Lug — Form the index transfer bellcrank stop lug for a .001"-.010" clearance between the stud on the lower index link and the lower horizontal edge of the slot in the index transfer bellcrank (Figure 2). This will ensure that the lower index link stud reliably restores to the front of the slot after a backspace operation.



Right Side View

Figure 2

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
24	120	1287925	Clip, Bellcrank Stop Lug	.60

MACHINES AFFECTED: All "Selectric" II dual pitch.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .1 hr.

Serv. Code 32

This CEM expires 10-30-76

308 RELIABILITY

1-28-76

Models 7XX, 8XX

(Revised) 2-28-79

CARRIER RETURN JERKY OR SLUGGISH

When experiencing jerky or sluggish C/R and normal adjustments (2 to 3 loop C/R shoe overlap and .015"-.020" shoe clearance, reference APM, frames 137 and 138) do not correct the condition, replace pinion gear (25-14). Some gears may not have the proper surface finish. Correct gears can be identified by a dull, dusty gray appearance over their entire surface. If jerky or sluggish condition exists after changing the pinion gear, the C/R actuating arm should be replaced with new level arm (CEM 316).

The torque limiter adjustment APM frame No. 143 should be adjusted to the high side of the 1 to 2 lb. "spec." Check the clamp (25-5) to ensure its mounting screw (25-8) is tight and the clamp is fully seated on the clutch spring (25-9) Figure 1.

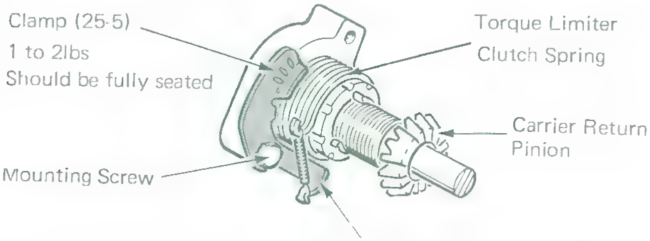


Figure 1

Caution: The spring lug extension may hit the carrier return shoe arm or the print interlock link when in full overthrow position. Form the tip of the spring lug down over the loop of the spring.

Continued

(CEM No. 308 Continued)

MACHINES AFFECTED: Approximately serial numbers 7X1-0618000-0625000; 8X3-1541000-1565000; 8X5-2856000-2902000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: Stocks of P/N 1123574 should be sorted for proper surfaces and suspect parts scrapped and reordered.

Service Code 32

This CEM Expires 10-30-76

309 RELIABILITY

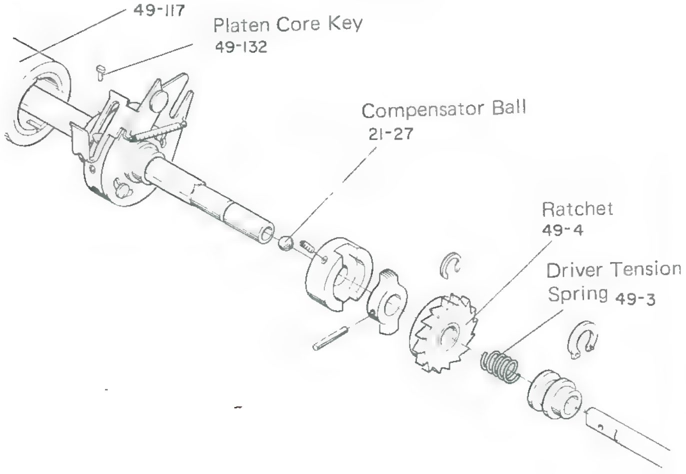
1-28-76

Models 7XX, 8XX

PINFEED PLATEN – ERRATIC LINESPACING

Three areas in addition to adjusting the indexing mechanism (see CEM 295) should be checked when experiencing erratic linespacing.

1. Insufficient driver spring tension (49-3). Check the tension with a spring scale against the left platen knob. It should be 1.5 to 2.5 lbs. just before the driver seats in the ratchet. The tension can be increased by installing a compensator ball (21-27) as illustrated.
2. Some 27 tooth ratchets (49-4), previous to this CEM, may have misaligned serrations. It is recommended the ratchet be changed if erratic linespacing is encountered.
3. Check the platen core key (49-132) for wear and replace the key and core if worn. Metal pinwheels have a replaceable key (P/N 1187957). Black plastic pinwheels have a molded key and replacement of the pinwheel is necessary.



MACHINES AFFECTED: Approximately serial numbers 7X1-0613000-0625000, 8X3-1528000-1565000, 8X5-2833000-2902000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: Scrap P/N 1128527 if received before 11-20-75 and reorder.

Service Code 32,

This CEM expires 10-30-76

310 SERVICE INFORMATION

3-10-76

Model: 8XX

(Revised) 2-28-79

PURPOSE: Correcting Mechanism – Redesigned

A new correcting mechanism has been designed to improve serviceability. This change includes a "floating torque bar." All adjustments and parts used with this design will be identified by the abbreviation "FTB." The old style carrier is no longer used. When changing to FTB, order the front carrier support asm. (26-130) and mode link (26-086). Also remove bracket (26-089) before installing FTB parts and add spring (26-052).

Figure 1 shows reference numbers of the new parts.

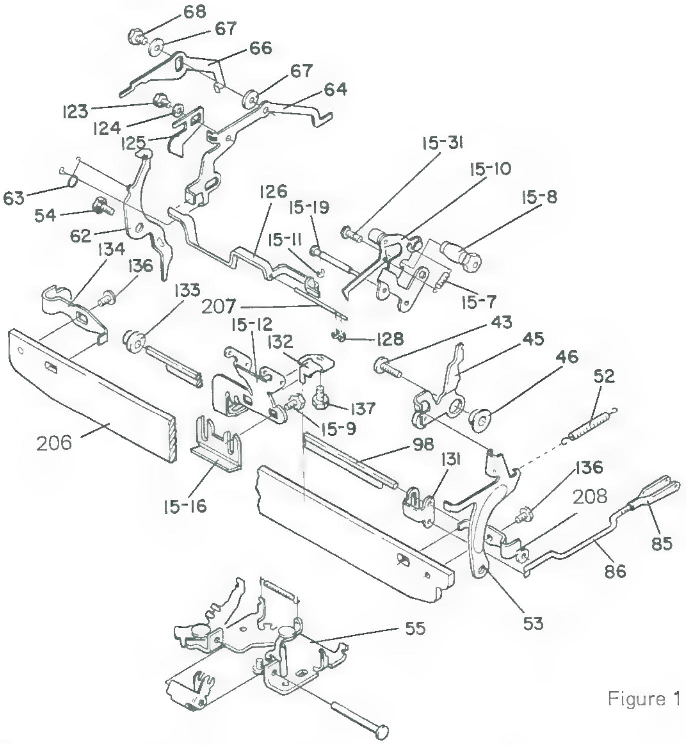
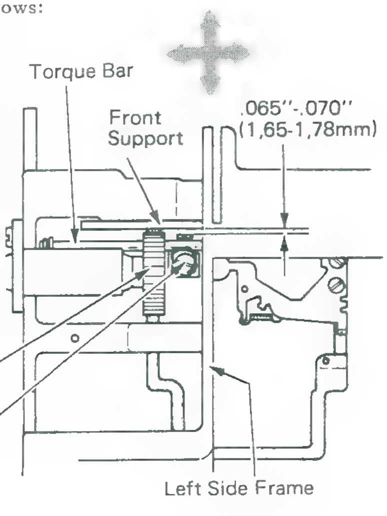


Figure 1

The new adjustments are as follows:

1. FTB Back-Up Adjusting Clip (26-132) — Move the carrier to the left until the adjusting clip is positioned between the intermediate drive gear and the LH side frame. Adjust the clip front-to-rear for .065"-.070" (1.65-1.78 mm) clearance between the back-up lug and the front support.

Note: Check to ensure the clip has not rotated clockwise when tightening causing a bind between the lugs on the guide and the torque bar.



Continued

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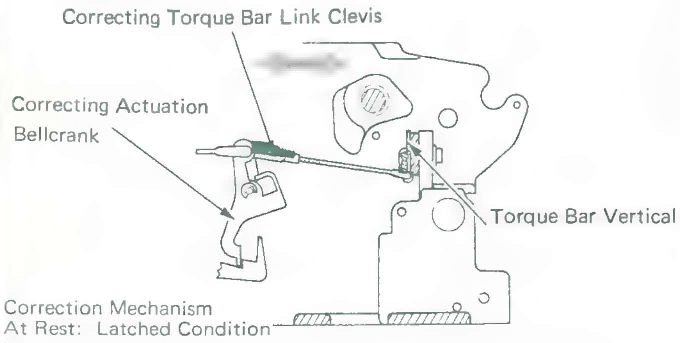
2. Torque Bar Link (Preliminary) (26-86) — Manually **hold the torque bar vertical** and adjust the torque bar link clevis to just span the distance to the correction bellcrank. The pin in the clevis must be in the front most position of the elongated slot in the bellcrank, reconnect link. THE TORQUE BAR SHOULD NOW BE VERTICAL.

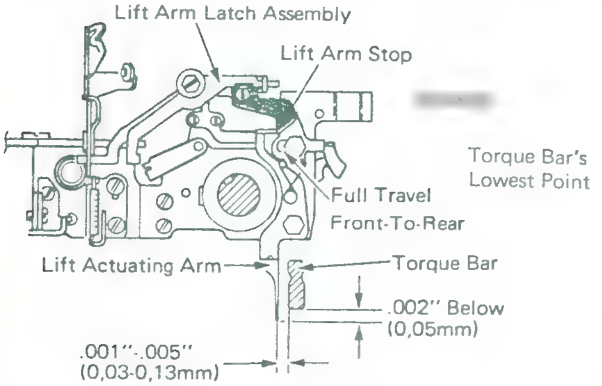

Correcting Torque Bar Link Clevis
Correcting Actuation Bellcrank
Torque Bar Vertical
Correction Mechanism At Rest: Latched Condition

3. a. Lift Arm Stop (26-125) — Adjust the lift arm stop for .001"-.005" (0.03-0.13 mm) clearance between the working surface of the lift actuation arm and the torque bar.

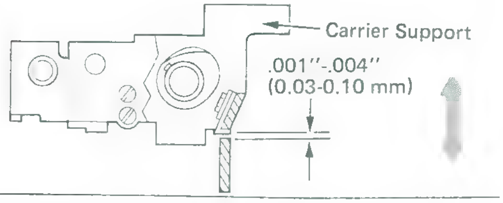
Note: The tip of the lift actuating arm must be a minimum of .002" (0.05 mm) below the bottom of the torque bar, at the torque bar's lowest point (center of writing line).

b. Raise the front carrier support for .001"-.004" (0.03-0.10 mm) clearance with no carrier binds. If adjustment of support does not get clearance below the torque bar, form the actuating arm down. Check to ensure the lift actuating arm is free of binds if forming was required. Check for possible interference with gear train idler gear.

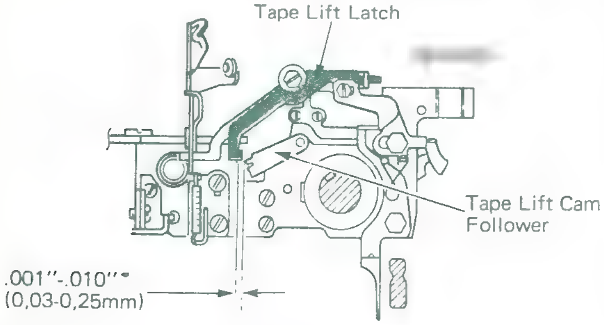
a.



b.

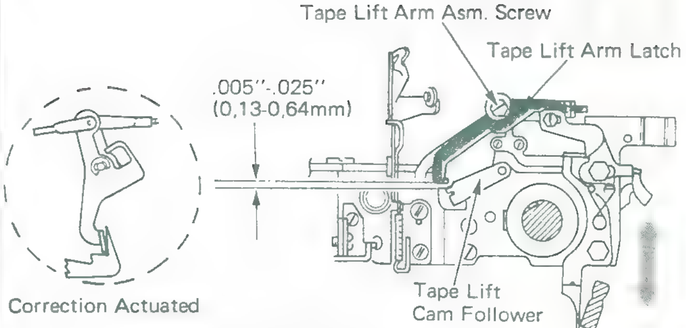


4. a. Tape Lift Latch Front-To-Rear (26-66) — With the machine at rest, adjust the lift latch front-to-rear for .001"-.010" (0.03-0.25 mm) clearance between the rear of the tape lift cam follower and the front lug on the tape lift latch.



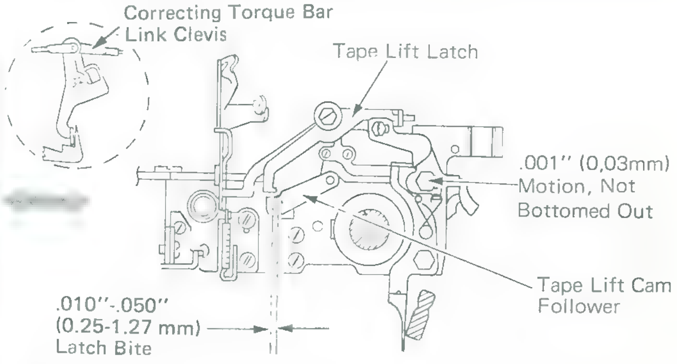
Machine At Rest: Correction Latched

b. Tape Lift Latch Height (26-66) — With the machine at rest and the **correction mechanism actuated**, adjust the tape lift arm latch vertically for a .005"-.025" (0.13-0.64 mm) clearance between the bottom of the latch and the lift cam follower.



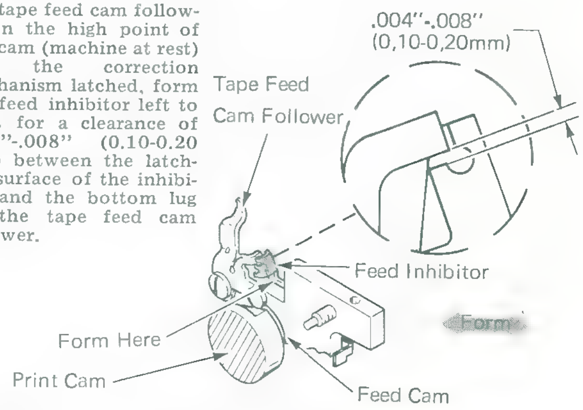
Machine At Rest: Correction Actuated

5. Torque Bar Link Adjustment (Final) (26-86) — With the machine at rest and the correction mechanism actuated, adjust the link for a minimum bite of .010"-.050" (0.25-1.27 mm) bite. Also, the actuation arm must not be bottomed against the arms' mounting stud. If there is no forward travel of the arm asm., readjust the link for a minimum of .001" (0.03 mm) motion. This is to make sure the system is not choking off.


Correcting Torque Bar Link Clevis
Tape Lift Latch
.001" (0,03mm) Motion, Not Bottomed Out
Tape Lift Cam Follower
.010"-.050" (0.25-1.27 mm) Latch Bite

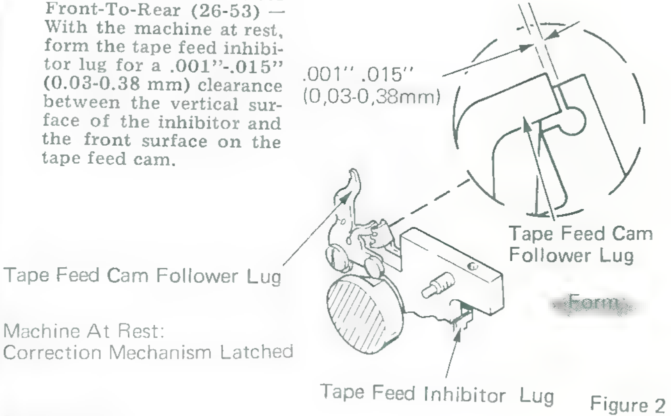
Machine At Rest: Correction Actuated

6. Tape Feed Inhibitor Height (26-53) — With the tape feed cam follower on the high point of the cam (machine at rest) and the correction mechanism latched, form the feed inhibitor left to right for a clearance of .004"-.008" (0.10-0.20 mm) between the latching surface of the inhibitor and the bottom lug on the tape feed cam follower.



Machine At Rest, Correction Mechanism Latched

7. Tape Feed Inhibitor Front-To-Rear (26-53) — With the machine at rest, form the tape feed inhibitor lug for a .001"-.015" (0.03-0.38 mm) clearance between the vertical surface of the inhibitor and the front surface on the tape feed cam.


.001" .015" (0,03-0,38mm)
Tape Feed Cam Follower Lug
Tape Feed Cam Follower Lug
Form
Tape Feed Inhibitor Lug

Machine At Rest: Correction Mechanism Latched

Figure 2

Continued

(CEM No. 310 Continued)

The inhibitor actuating bellcrank is preset at the plant and should not have to be adjusted in the field to meet any of the required adjustments. The ribbon feed pawl mounting bracket asm. has been redesigned to mount the torque bar guide clip. [THIS BRACKET (APM, FRAME 262) SHOULD BE ADJUSTED DOWN TO ITS LOWEST LIMITS. THE ADJUSTMENT OF THE FEED CAM FOLLOWER BRACKET TO ALIGN THE PAWL IN THE FEED WHEEL (15-73) (APM, FRAME 262) IS NOW PERFORMED ON THE FTB LEVEL BY FORMING THE REAR OF THE RIBBON FEED PAWL.] FORM THE FEED PAWL ASM. TO CENTER THE FEED PAWL IN THE WINDOW OF THE FEED WHEEL.

Note: Check that the ribbon feed pawl mounting stud (Figure 2) clears the lift control lever by a minimum of .010" (0.25 mm) with the machine in the low lift position.

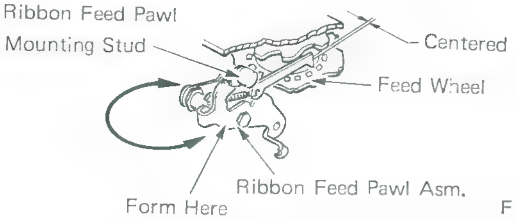


Figure 2

The shift interrupter mounting bracket (26-91) used on the new FTB mechanism is now the same one used on all X3 and X5 non-correcting. However, it does use a new mounting screw (16-69) (26-92).

MACHINES AFFECTED: Below 8X3 — 1598062, 8X5 - 2967661.

311 SERVICE INFORMATION

3-10-76

Models: All "Selectric" Typewriters

(Revised) 2-28-79

"SELECTRIC" TYPEWRITER SERVICE HINTS

The purpose of this CEM is to acquaint the field with a variety of service hints. Customer engineers may use whatever methods that work best for them, however, the following hints may be useful. We will update this CEM periodically and place previous information into the proper publication:

1. The new operational shaft support bearing (25-304) should be lubricated on each service call.
2. The rotary B/S drum and ratchet asm. (24-6) can be removed through the hole in the bottom of the frame by removing the B/S bellcrank upstop (24-116) and the C/R shoe mounting bracket (03-500). This eliminates the need to remove the B/S plate (24-1) when changing the ratchet and drum asm.
3. It is possible to damage some of the operational keybuttons if the "Selectric" Typewriter is stored on its back. Caution should be exercised if this storing condition is encountered.
4. If experiencing transfer of ink from paper feed rollers (22-286, 287) to the original, a single layer of cellophane tape can be wrapped around the rollers. This is pertinent on coated papers such as multilith masters.
5. A paper clip can be used to hook the C/R and tab cords together when replacing the carrier on the "Selectric" Typewriter. This keeps the cords out of the way during carrier replacement and facilitates their reinstallation.
6. It is **NOT** advisable to use the price list on the back of the "Inventory Maintenance Guide," F/N 241-5497-3, as its printing schedule does not allow it to keep abreast of price changes.
7. When adjustment of the steel C/R or tab cables (24-43) (19-22) becomes necessary (within six months of installation) due to stretching of the cables, change the cables as the stretching indicates that the cable strands are breaking.
8. When adjusting the margin switch pitch gear (dual pitch) end play (A/PM, frame 312), it is necessary to remove all of the motion of the rack within the rail to the left. This can be accomplished by holding the rail and moving the rack to the left with the right margin slider.

(Continued)

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(CEM 311 Continued 9-8-76)

9. Partial carrier return: complete carrier return failures and some partial return failures can sometimes be traced to nearly simultaneous operation of spacebar and return (e.g., at the end of a typed line). The condition occurs because spacebar cam follower operates interposer restoring bail before C/R operational latch can be positioned under the index cam follower. Solution: Clip spring, P/N 1090341, to 3/4" length, forming each end and installing it between the C/R operational latch and the rear bottom edge of the spacebar cam follower (Figure 1). The spring should loosely span the distance between parts at rest and not interfere with vertical linespacing.

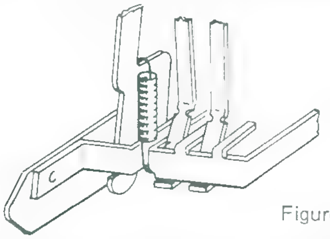


Figure 1

10. If the screw hole in the middle cover (where the top cover hinge mounts) is stripped, a possible fix is to use the self-tapping screw, P/N 1190587, to remount the hinge.
11. The "Selectric" motor is equipped with an internal thermal coupler that acts as a circuit breaker when it becomes overheated due to an abnormal strain on the motor. If a motor that will not start and a bind in the drive mechanism has been diagnosed, it is advisable, after removing the bind, to allow the motor to cool to ensure that the coupler has time to close the circuit, thus avoiding unneeded replacement of the motor due to the thermal coupler.
12. New "Selectric" character interposers are oil impregnated instead of plated. These interposers appear dark in color and, in some cases, are mixed with the plated interposers.
13. The 7/32-3/16" wrench, P/N 9900208, may be formed to aid the accessability of the lower adjusting nut (02-526), which should be loosened to make the skirt clearance adjustment (A/PM, frame 52).
14. It is possible that the new 1/4-5/16" wrench (with blue dot) will not fit the rotate turnbuckle on early level machines. It will fit the locknuts. If experiencing this problem, use gas pliers to adjust the turnbuckle.
15. If experiencing extra cycles, check that the cycle clutch latch shock absorber (21-526) has not slipped from between the latch (21-524) and guide asm. (21-530). Flush excessive grease from shock absorber if necessary.
16. If experiencing a weak index operation after completing the index adj. in CEM 295, check operational shaft support adjustment (25-56). If old level support is on machine, upgrade to new level (refer to CEM 289).
17. Air dry touch-up paint for the "Selectric" Typewriter can be found in the C & D Typewriter Manual, F/N 241-5231-8 (04-89).
18. If you have a broken keylever spring (21-135, 136), it is possible to remove the unused leaf spring from ref. 135 and slide it between the broken leaf spring and the guide comb (ref. 137 or 138) and tighten screws (ref. 140).

312 SERVICE INFORMATION

3-10-76

Models: All "Selectric" Typewriters

(Revised) 2-28-79

KEYLEVER PAWLS – STICKY

OBSOLETE.

313 SERVICE INFORMATION

3-10-76

Model(s): 7X1 A-Frame

(Revised) 2-28-79

Carbon Paper Marking

OBSOLETE. Refer to CEM No. 353.

314 SERVICE INFORMATION

3-24-76

Models: All "Selectric" Typewriters

(Revised) 4-21-76

DOUBLE INDEX MECHANISM

Provides 2, 3, 4 and 6 lines per inch with standard 54-tooth indexing, or 2, 4, and 8 lines per inch with standard 36-tooth indexing for printing and publishing customers with OCR applications. This mechanism provides a second index operation for each carrier return operation, or can be locked out for normal linespacing.

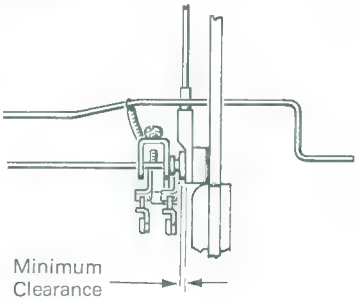
This double index can be installed on all domestic "Selectric," "Selectric" II, and Correcting "Selectric" typewriters, with the exception of machines equipped with the following:

1. Manual velocity control
2. Shift sensing
3. Space to print interlock
4. AVC inhibitor

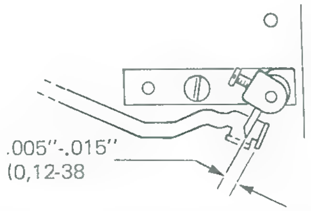
Installation of this double index B/M is billable at current labor rate.

ADJUSTMENTS: All index adjustments must be correct. Refer to PRAM (frame 220 — frame 226).

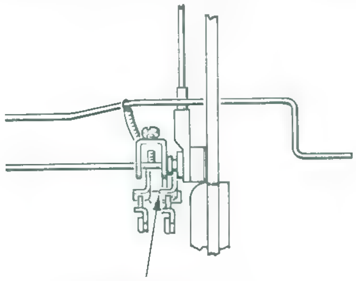
1. Adjust tripper:
   a. Left to right for minimum clearance between the spacer and locator.



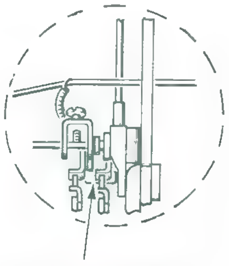
   b. Rotationally for .035"-.045" clearance to the index keylever pawl.



2. Adjust the locator for positive engagement and disengagement of the tripper to index keylever pawl. (Note: Spacer, Reference 41, may not be needed on all machines. Keylever pawl guides may be spread slightly to increase clearance to facilitate positive disengagement.)

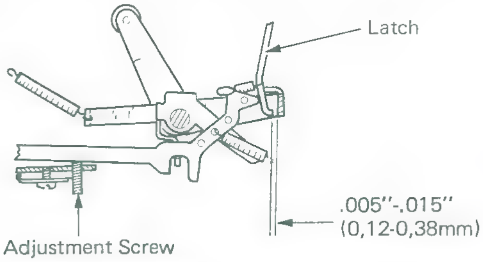


Positive Engagement



Positive Disengagement

3. Adjust CR interposer adj. screw for a latch clearance of .005"-.015" (0,12-0,38mm).



Note: If experiencing extra C/R cycles, increase this adjustment to .030".

323 RELIABILITY

9-8-76
(Revised) 2-28-79

Models(s) Correcting "Selectric" Typewriter

SUBJECT: Paper Bail Arms — Redesigned

OBSOLETE. Refer to CEM No. 359.

324 SERVICE INFORMATION

9-8-76
(Revised)
10-20-76

Model(s) Correcting "Selectric" Typewriter

SUBJECT: Correcting Tape Feed — Redesigned

The correcting tape feed parts have been redesigned to facilitate manufacturing. When replacing the early level feed pawl and link asm. (26-4), it will be necessary to order ref. 4, 5, and 216 (Fig. 1).

ADJUSTMENTS: Remain the same.

MECH. 26

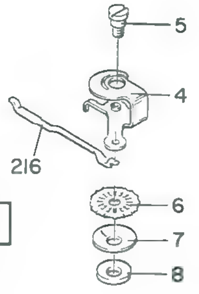


Figure 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
26	4	1290655	Pawl	.10
	5	1290653	Screw	.15
	216	1290654	Link	.15

Note: A B/M will be available at a later date that will contain the necessary parts for conversion.

MACHINES AFFECTED: Above approx. S/Ns 1600750 and 2973088.

325 SERVICE INFORMATION

9-8-76

All Models

SUBJECT: On/Off Button Jammed — Sound Pack Frame

The membrane frame (30-25) should be removed from the keyboard before tilting machine to the upright position. The frame falls under the on/off button, jamming it in the on position.

326 SERVICE INFORMATION

10-6-76

Model(s): All "Selectric" II Typewriters

SUBJECT: Platen Knobs & Vent Grills — Black

Platen knobs and vent grills for "Selectric" II Typewriter 8X3 and 8X5 machines will be available in black only. When ordering a replacement knob, it will be necessary to order two.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
05	22	1204516	Vent Grill (Black)	.60
12	50	1205428	Page End Indicator (Black)	.40
	54	1206868	B/M Page End Indicator & Knob (Black)	*
	55	1205427	Platen Knob SE II (Black)	1.00

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: Scrap existing stock of part number 1204196, 1204612, 1205456, 1204711, 1204710, 1205237, 1204545, 1204544, 1205453.

Use Applicable Service Code

327 SERVICE INFORMATION

10-6-76

Model(s): SE & SE II Typewriters (Non-Correcting)

SUBJECT: Universal Cardholder Bracket

Provide a universal cardholder bracket for "Selectric" and "Selectric" II (non-correcting) typewriters to allow installation of all snap-in cardholders. The bracket and feet are assembled (Fig. 1).

ADJUSTMENTS: Remain the same.

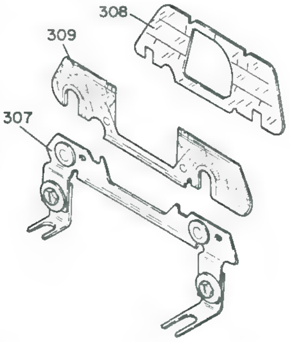


Figure 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
22	307	1290646	Cardholder, Mounting Bracket Asm.	.75
	308	1287857	Cardholder, D-Shaped	1.20
	309	1206368	Cardholder, Pinfeed	.90
	310	1206681	Pinfeed Asm. (Includes 309 & 307)	*
	311	1290647	B/M "D" Shaped (Includes Ref. 307 & 308)	*

MACHINES AFFECTED: All SE and SE II (non-correcting) typewriters.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .3 hr.

Use Applicable Service Code

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328

SERVICE INFORMATION

10-20-76

Model(s): 8XX

SUBJECT: Margin Pointer – Dual Pitch

Mech 10

PURPOSE: The margin pointer for the Dual Pitch "Selectric" II has been redesigned. The new level pointers (Figure 1) will be solid red and the clear plastic pointer is no longer available.

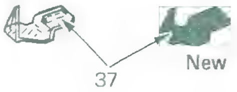

Figure 1

NOTE: The P/Ns will remain the same.

329

SERVICE INFORMATION

12-15-76

Model(s): 7XX , 8XX

SUBJECT: Type Elements – Broken Teeth

Broken teeth in the area of the hyphen (-) or the upper case "G" can be caused by not fully detenting the lever, in the open position, before the element is lifted off the tilt ring. Removal of the element before fully opening the lever causes the teeth to strike the upper ball socket (Figure 1).

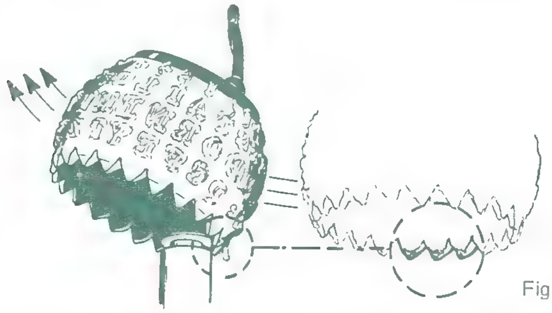

Figure 1

Detenting of the lever in the open position before lifting the element should be emphasized to all operators.

330

SERVICE INFORMATION

12-15-76

Model(s): SE II's With Sound Reduction

SUBJECT: Steel Membrane Support – Changed

The steel keyboard membrane support (30-25) has been replaced by a foam rubber support on machines manufactured with the sound reduction package.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
30	25	1206988	Membrane Support	1	.15

MACHINES AFFECTED: Plant installed above approx. 8X3-1667030, 8X5-3117125.

Use Applicable Service Code

331

SERVICE INFORMATION

1-26-77

MODEL(S): 7XX & 8XX

SUBJECT: Platens

Some replacement platens have reached the field without the variable release washer (12-23). This effects the new level platens that have the metal end plugs on the right hand side. This platen requires a smaller washer than the old level platen.

If this condition exists, order washer (12-23).

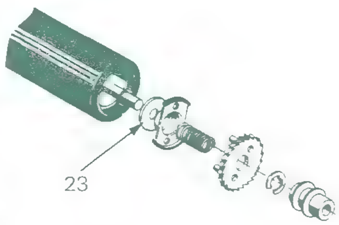

Figure 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
12	23	1206927	Washer	*

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code.

332

SERVICE INFORMATION

1-26-77

Model(s): 8XX

SUBJECT: Escapement Rail – Dual Pitch

PURPOSE: The escapement rail material has been changed to molded polyester. If replacement is necessary on machines below S/Ns listed, replace screw (07-12) (Figure 1). Order four screws for the 8X3 and six screws for the 8X5.

ADJUSTMENTS: Adjustments remain the same.

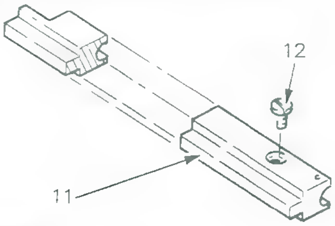

Figure 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
07	11	1204028	Rail, Esc. 8X3	*
	11	1204029	Rail, Esc. 8X5	*
	12	1290567	Screw	*

MACHINES AFFECTED: 8X3 above approx. S/N 1790000 and 8X5 above approx. S/N 3279000.

333

RELIABILITY

1-26-77

MODEL(S): 8XX

SUBJECT: Lower Index Link C-Clip – Redesigned

PURPOSE: The lower index link C-clip has been redesigned to eliminate clip breakage.

INSTALLATION: Caution should be taken when installing the clip. It is possible to damage the clip by applying too much pressure. Use the new C-clip applicator tool (P/N 9900612) and push clip over stud to the first opening. Also check the following areas:

1. Check that the index transfer bellcrank stop lug is not worn (CEM 307).
2. Check that the index transfer bellcrank (20-14) does not have excessive end play. Add additional bail clips (03-632, P/N 1147155) to hold this adjustment if necessary.
3. Ensure that the lower index link is vertical. If not, it can create pressure on the C-clip. Adjust the switch bracket left or right for this adjustment.

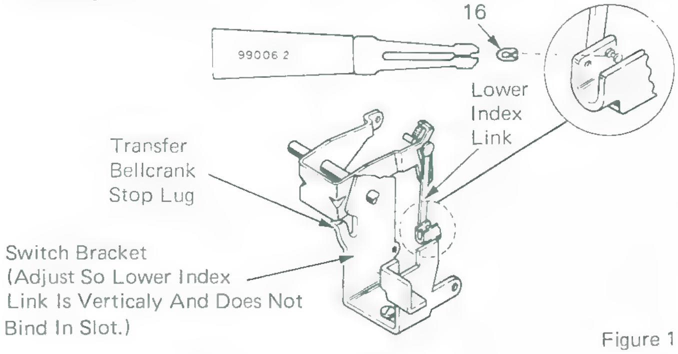
16
99006 2
Lower Index Link
Transfer Bellcrank Stop Lug
Switch Bracket (Adjust So Lower Index Link Is Verticaly And Does Not Bind In Slot.)

Figure 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
20	16	1290995	Lower Index Link C-Clip	*

MACHINES AFFECTED: 8x5 between approximate S/Ns 2973000 & 3290000, 8x3 between approximate S/Ns 1600000 & 1740000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .4 hrs.

Use Service Code 32.

This CEM Expires 1-31-78

342 SERVICE INFORMATION

5-4-77

Model(s): 7XX, 8XX

(Revised) 2-28-79

SUBJECT: Print Quality – Platen Height Adjustment

SYMPTOM: Print quality problems, such as tails on the characters and poor edge definition. The platen cannot be adjusted low enough to get even top and bottom print. Check the platen height adjustment with the platen gauge (APM frame 194).

SOLUTION: With the platen gauge installed and the platen adjusted for .030" (0.76 mm) clearance between the top of the platen and platen gauge, the platen should need only slight adjustment to get even top and bottom print. If the platen height eccentrics require excessive adjustment downward for even top and bottom print, the yoke (02-520) could be the problem. The tilt detent slot may be off location.

Since this condition cannot be seen, it is recommended the yoke be changed before attempting further print related adjustments.

Refer to tilt ring and rotate shaft removal procedure in service manual (F/N 241-5615) (p. 226) for service hints.

After replacing yoke, check all print adjustments with emphasis on homing and skirt clearance after adjusting the position of the yoke.

1. Position the yoke rotationally under its mounting screws so the density of the left and right sides of a printed character is uniform (Figure 1).

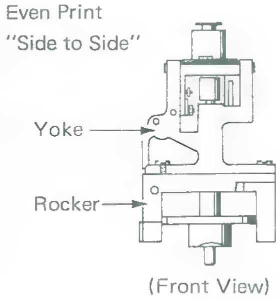

Figure 1

343 SERVICE INFORMATION

5-4-77

Model(s): 8X3, 8X5 – Dual Pitch

SUBJECT: Margin Rack Toggle Spring – Removed

PURPOSE: The margin rack toggle spring (10-28) has been removed on all Dual Pitch "Selectric" IIs. The escapement rack gear toggle spring (07-24) has been replaced with a stronger spring to provide the necessary tension to toggle both the escapement rack and margin rack. When either the margin rack or escapement rack toggle springs require replacement on machines with both springs, remove both springs and install the stronger escapement rack spring.

ADJUSTMENTS: Remain the same.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
07	24	1290908	Escapement Rack Toggle Spring	.04

MACHINES AFFECTED: Plant installed above approx. S/N 8X3 – 1736931, 8X5 – 3268887.

344 SERVICE INFORMATION

5-4-77

Model(s): 8XX Correcting "Selectric"

SUBJECT: Correcting Tape Take Up Spool Interfering With Paper Feed

If experiencing problems with the correcting tape take up spool interfering with the top edge of cards or forms, the new level lug (Fig. 1) can be formed to the right. This keeps the paper from hitting the upper flange of the take up spool. Also, it may be necessary to readjust the lug front-to-rear for clearance to the platen (APM frame 307).

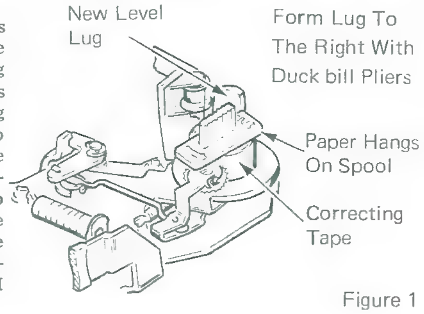

Figure 1

345 SERVICE INFORMATION

5-4-77

Model(s): 7XX & 8XX

(Revised) 12-28-77

SUBJECT: Operational Clutch Wheel – Wearing

If experiencing a repeating spacebar and backspace operation, check the adjustment shown in Figure 1. Insufficient bite of the clutch release arm (25-239) to the clutch wheel (25-44) can cause premature wear. A repeating operational cam may look like escapement failures (skipping or crowding of characters). Check the latching surface on the clutch wheel; if the latch is rounded, the operational cam on the latch ring should be changed.

NOTE: Check adjustment by manually releasing the latch from the bottom of the machine. Do not check this adjustment by releasing the spacebar as the load of the spacebar interposer will cause an incorrect reading.

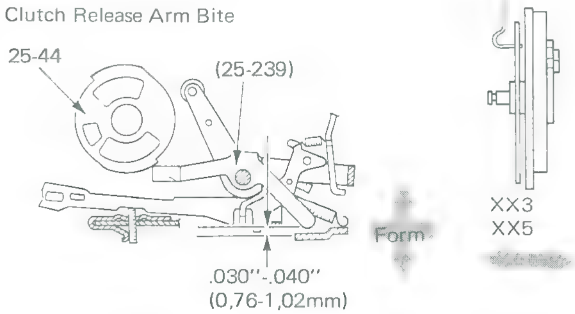

Figure 1

346 SERVICE INFORMATION

5-4-77

Model(s): 8X3, 8X5 – Dual Pitch

SUBJECT: Escapement Torque Backup Screw Nut – Discontinued

The left hand escapement torque bar screw nut (07-61) has been discontinued on all dual pitch "Selectric" II typewriters. The escapement rack torsion spring (07-48) will provide the necessary tension to hold the screw in place.

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347 SERVICE INFORMATION

6-15-77

Model(s): 7XX, 8XX

SUBJECT: Type Element — Orator, Language Arts — New

A new Orator language arts element has been announced for use in the elementary education language arts programs. The Orator L/A typestyle includes the present Orator uppercase letter forms combined with newly designed compatible lowercase letter forms. Also, the character set includes five pronunciation symbols used in elementary education language arts programs (Figure 1).

The 236 language arts keyboard has two dead key positions located in positions 41 and 43.

APPLICATION: This element is not recommended for use with correctable film ribbon. It may be used with all other film carbon and fabric ribbons, but best results are obtained by using the Tech III ribbon with smooth finish bond paper (16 to 20 pound weight) and no carbon copies.

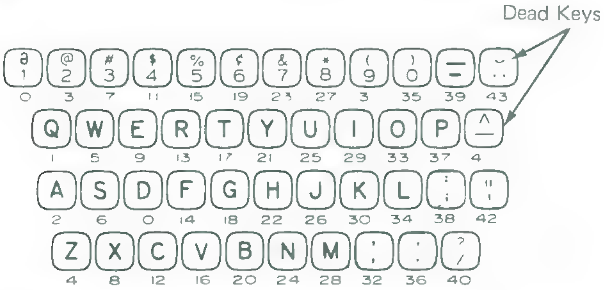


Figure 1

PARTS REQUIRED:

MECH/REF.		PART NO.	DESCRIPTION	PRICE
02	180	1167236	Orator Language Arts Type Element	18.00

348 RELIABILITY

6-15-77

Model(s): All Models

SUBJECT: Latch — Top Cover

PURPOSE: The top cover latch (4-83) 7XX and latch (5-2) 8XX have been strengthened. IF experiencing vibrations with top covers, replace latch (gold in color) with new latch (silver in color).

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
04	83	1141520	Latch (7XX)	2	.05
05	2	1205299	Latch (8XX)	2	.09

MACHINES AFFECTED: Between approx. S/Ns 7XX-6031956-6033770 8X3-1584050-1756773, 8X5-2939243-3312409.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: Scrap old stock and reorder. Part numbers remain the same.

Use Service Code 32

This CEM Expires 6-1-78

349 SAFETY

8-24-77

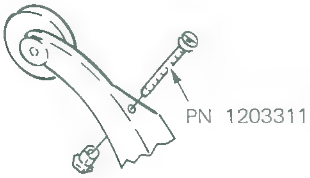
Model(s): 725

SUBJECT: Shift Adjusting Screw.

SAFETY LOCATION: Some reconditioned 725 "Selectric" machines have reached the field with a bristol head lower case adjusting screw in the shift arm. This bristol could cause hand injury when using the hand cycle wheel.

SAFETY PRECAUTION: Check lower case shift adjusting screw on next service call.

SAFETY CORRECTIVE ACTION: Replace bristol-type adjusting screw with fillister head screw (P/N 1203311).



Note: This change applies only to reconditioned 725's that were converted from Selectric I/O's. Part references are shown in the MT/ST—I/O APM (16-49, P/N 1203311).

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .2

Use Service Code 32

This CEM expires 6-24-78

350 SERVICE INFORMATION

8-24-77

Model(s): 7XX-8XX

SUBJECT: Torque Limiter Spring Clamp-Redesigned

PURPOSE: Provide stronger support for torque limiter spring and prevent spring ear from breaking.

SOLUTION: Install redesigned clamp (Figure 1).

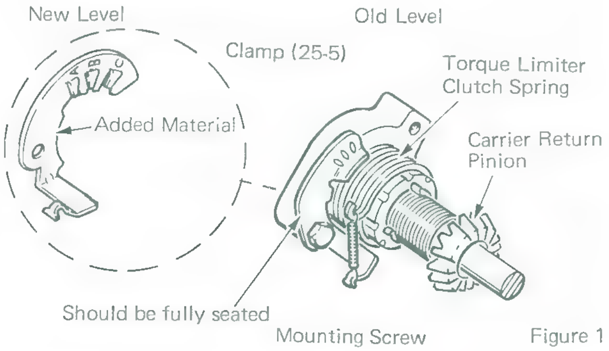


Figure 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	5	1290992	Clamp	1	.10

351 SERVICE INFORMATION

9-21-77

Model(s): All Models

SUBJECT: Retainer Clip (Interposer Restoring Bail)

PURPOSE: When replacing interposer restoring bail (25-216), be sure to reinstall retainer clip (25-217) properly as this is a spring loaded clip to hold the bail tight.

If the clip is installed backwards, there will be lost motion in the restoring bail (Figure 1).

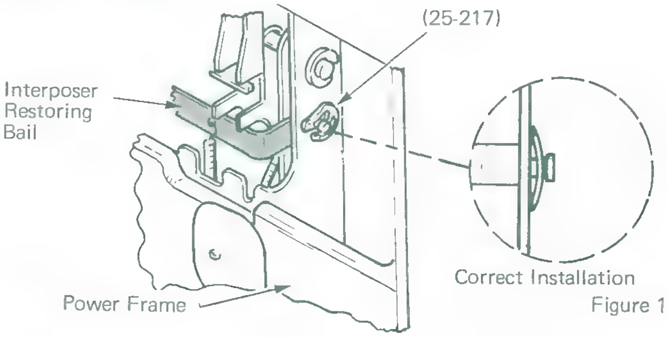


Figure 1

352 SERVICE INFORMATION

9-21-77

(Revised) 12-28-77

Model(s): 8XX, 9XX

SUBJECT: Customer Set-Up Program

OBSOLETE

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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353 SERVICE INFORMATION

12-28-77

Model(s): 7X1, XX3, XX5

(Revised) 2-28-79

SUBJECT: Feed Rolls – Marking Original And Carbon Copies

If experiencing feed roll marks on original and/or carbon copies, replace with light gray plastic insert feed rolls (22-286, 287). The feed rolls are resistant to chemical reactions with carbon and copied paper. Also the rubber is softer to reduce carbon marking. If still experiencing carbon marks on copies after replacing feed rolls, the tie rod springs (22-87) may be used on the "A" frame machines.

Adjust springs for 16-20 oz. feed roll tension.

Note: The part numbers will remain the same and are located in the current PN/PL. All old style parts have been scraped.

354 SERVICE INFORMATION

12-28-77

Model(s): All

(Revised) 7 12-78

SUBJECT: Index Pawl – Misalignment

If experiencing intermittent problems with the index pawl (20-432) camming out of the platen ratchet (12-20), remove the washer between the platen bushing (12-22) and the "C"-clip (12-21)(Fig. 1). If this method is not effective, replace platen.

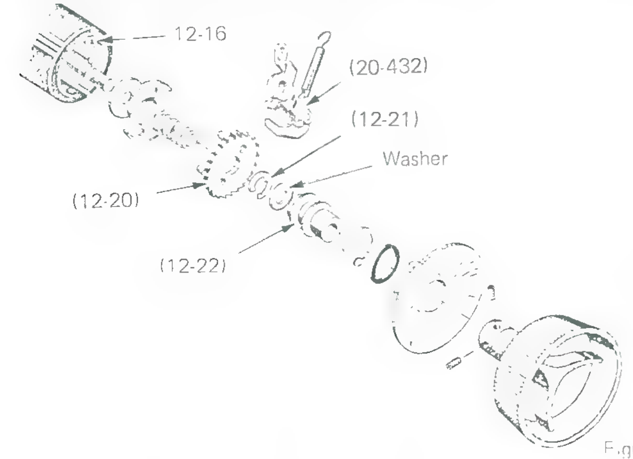

Figure 1

Note: Reporting offices use Mech 12 Ref. 20 when time is spent removing washer.

355 SERVICE INFORMATION

12-28-77

Model(s): 8X3, 8X5

SUBJECT: Cable C/R Transport With Rotary B/S

The transport cable (24-43) has been resized to a common length for both the 8X3 and 8X5 machines with rotary backspace. The color has been changed to light brown for identification.

The resized cable will have the same P/N as the 8X3 cable.

ADJUSTMENTS: Remain the same.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
24	43	1204677	Cable, C/R Transport (8X3-8X5)	1	2.15

356 SERVICE INFORMATION

12 28-77

Model(s): All

(Revised) 7 12 78

SUBJECT: Stop, Eccentric Overthrow – Redesigned

The index overthrow (OT) stop has been redesigned (Fig. 1). An adjusting eccentric has been added to the OT stop to aid in making adjustments. When replacing OT stop (20-452) on machines with eccentric OT, the new level stop must be used.

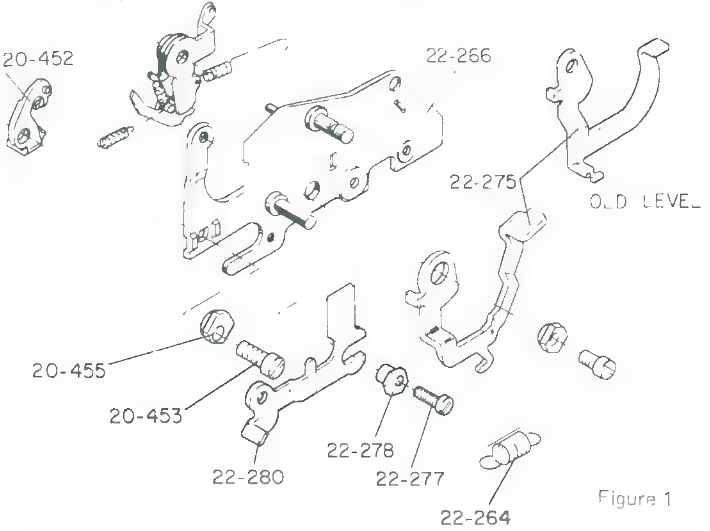

Figure 1

The platen latch (22-275) has also been redesigned to prevent interference between eccentric and platen latch. The new style latch is compatible with all level machines. When replacing old level latch, the spring (22-264) must be changed to new level (short spring).

The detent asm. (20-471) has also been redesigned (Figure 2) for compatibility with the eccentric overthrow stop. The ratchet tooth identification will be stamped on the detent asm. The old style detent asm. is not compatible with the eccentric overthrow paper feed asm.

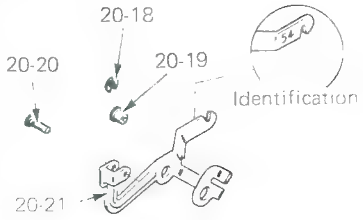

Figure 2

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
12	32	1290935	Det. Rel. Lev.	1	.75
20	18	251989	Clip	1	.02
	19	1290610	Roller, 54T Ecc. OT	1	.15
	20	1290631	Stud, 54T Ecc. OT	1	.07
	21	1290619	Lever, 54T Ecc OT	1	.30
	452	1290611	Stop, Index OT	1	.25
	453	38282	Screw, OT Stop	1	.05
	455	1290630	Eccentric, OT	1	.05
	470	1290691	Lever, 54T Ecc. OT, 721	1	*
	471	1290624	Detent Asm. 54T Ecc. OT	1	.55
	471	1290692	Detent Asm. 54T Ecc. OT, 721	1	*
	471	1290625	Detent Asm. 45-48T Ecc. OT (Order Ref. 18, 22)	1	*
	471	1290626	Detent Asm. 24T Ecc. OT	1	.75
	471	1290627	Detent Asm. 27T Ecc. OT	1	.60
	471	1290696	Detent Asm. 24T Ecc. OT, 721	1	*
	471	1290628	Detent Asm. 36T Ecc. OT	1	3.00
	471	1290629	Detent Asm. 31T Ecc. OT	1	*
	499	1287922	24T B/M Ecc. OT	1	*
	500	1287923	54T B/M Ecc. OT	1	*
	501	1287921	45-48T B/M Ecc. OT	1	*
22	264	1290621	Spring Ecc. OT	1	.03
	275	1290613	Latch 8XX	1	.15
	275	1290697	Latch 7XX	1	.30
	277	38353	Screw	1	.08
	278	1124378	Eccentric	1	.10
	280	1290612	Bracket Eccentric O/T	1	*

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357

SERVICE INFORMATION

12-28-77

Model(s): All

SUBJECT: Oil Wick – Return Cam Follower Roller – New

PURPOSE: An oil wick has been added to the return cam follower roller (25-204) to reduce wear (Fig. 1). This wick is field installable and has been included in the field replacement B/M (P/N 1287354).

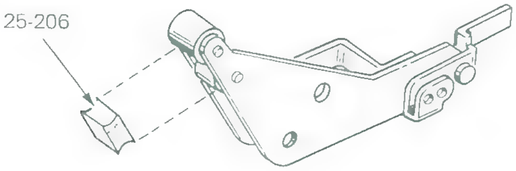

Figure 1

The oil wick should be saturated with oil and inserted between the roller and brace (25-204).

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	206	1187194	Oil Wick	1	.05

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

358

SERVICE INFORMATION

12-28-77

Model(s): 7XX, 8XX

SUBJECT: Indexing Conversion B/M 54 to 27 Tooth

Conversion from 54 tooth indexing to 27 tooth is now possible by changing three parts: the detent roller (20-19), the platen ratchet (12-20), and the lever (20-322). This B/M is compatible with all level 54 tooth index mechanisms.

When converting from 54 to other ratchets, consult the indexing chart located in the back of the "Selectric" Part No./Price List for the necessary parts (Figure 1).

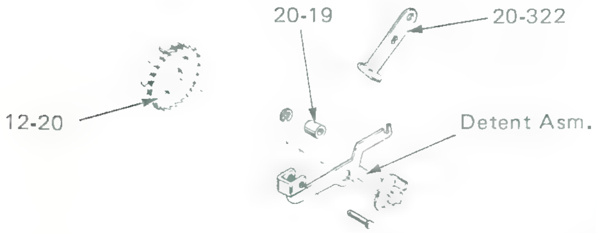

Figure 1

ADJUSTMENTS: Adjustments remain the same as the 54 tooth mechanism. See "Selectric" CEM 295.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
20	516	1279010	54 to 27 Tooth Conversion B/M Includes:	1	*
	322	1279009	Lever 27 Tooth	1	*
	19	1279008	Detent Roller, 27 Tooth	1	*
12	20	1164463	Ratchet, 27 Tooth	1	4.25

359

SERVICE INFORMATION

12-28-77

Model(s): 7X3, 7X5, 8XX

(Revised) 2-28-79

SUBJECT: Paper Bail Arms And Springs – Universal

A universal paper bail arm (26-74, 100) for "Selectric" II and correcting "Selectric" typewriters is now available. This change does not affect the 7XX machines.

On some early level machines it may be necessary to use washer (26-210) (Figure 1) on the inside of the left-hand paper bail to remove interference with the platen latch. The washer is available in parts packet No. 8.

The paper bail arm spring (26-209) should be used with all paper bail arms 8XX and 7XX (Figure 1).

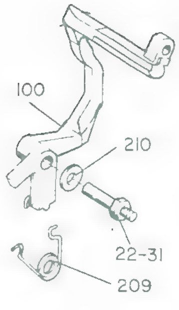

Figure 1

360

SERVICE INFORMATION

2-22-78

Model(s): 8XX

SUBJECT: Wobbler Spring – Removed

The wobbler spring (15-26) has been removed from production machines. The ribbon lift arm spring (15-78) supplies restoring motion to the wobbler. It is not necessary to install the spring on new machines or to replace the spring when working with this mechanism on machines presently in the field (Fig. 1).

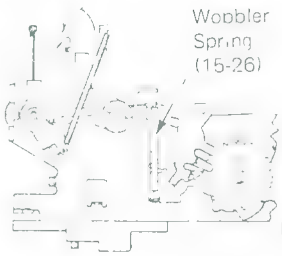

Figure 1

361

SERVICE INFORMATION

5-3-78

Model(s): 7XX "Selectric" Typewriters

SUBJECT: Vent Grills

PURPOSE: Vent grills for "Selectric" (7XX) typewriters will be available in black only. Colored vent grills will remain available until existing stock is depleted, then substituted to black.

362

RELIABILITY

5-3-78

Model(s): 8XX

SUBJECT: Torque Limiter Arbor – Defective

PURPOSE: Some machines may have reached the field with edge of the torque limiter arbor (25-11) rounded (Figure 1).

SYMPTOM: The rounded edge may allow the torque limiter spring (25-09) to drop between the hub (25-03) and arbor.

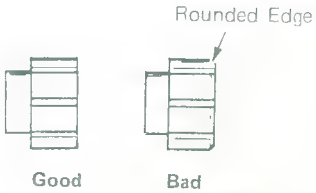

Figure 1

SOLUTION: Change arbor.

MACHINES AFFECTED: 8X5/3688555 — 3721131, 8X3/1921645 — 1933765.

Use Service Code 32

This CEM Expires 5-3-79

(CEM No. 368 Continued)

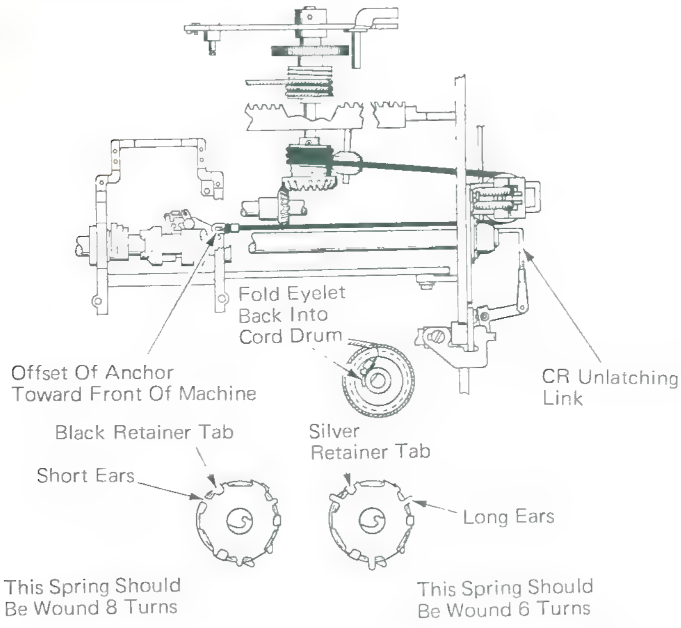

Figure 3

3. With the carrier all the way to the left, connect the tab cord to the carrier and position the cord through the right power frame and around the transport pulley then connect it to the front drum (Fig. 3). It is not necessary to wind the cord around the drum. With the cord attached to both ends, unlatch the C/R and guide the cord onto the drum while rotating turning wheel. (This will wind the rest of the cord onto the drum) then place the cord on the cord pulley (19-17) (Fig. 1).
4. Turn machine on and space or tab the carrier over the operational shaft area for easier installation of the C/R cable. Turn the machine off and be careful not to B/S or C/R, because it will unwind the tab card. Next, loosen the set screws in the B/S drum. With the machine off, cycle a B/S operation until the driver engages the ratchet. This will help in the installation of the C/R cable.
5. Attach the cable to the anchor bracket (use the fork end of a spring hook), run the cable around the pulleys and tilt machine up. Hook the cable onto the B/S drum and hold in position while rotating ratchet to wind the excess cable onto the drum. This can be done by releasing the driver from the drum while holding and rotating the drum with the same hand, at the same time hold tension on the cable with a spring hook from the left end of the machine. Do not position the cable around the front pulley and take up all excess cable and then tighten the B/S drum. Hook the cable over the front pulley and check for proper adjustment of the transport pulley (Frame 103).
6. Connect C/R unlatching link.
7. Perform a functional check.

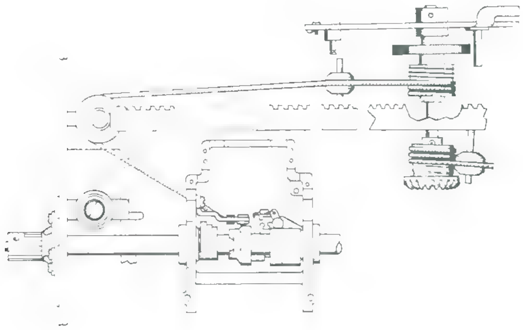

Fig. 4

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
19	149	1205784	Trans. Pulley B/M	1	2.20
	14	1164561	Escap. Shaft	1	.75
	17	1124628	Pulley	1	.45
	18	1128108	Tab Drum	1	1.20
	22	1175579	Cord	1	.35
24	06	1205779	B/S Drum	1	4.15
	27	1206990	Spring, Driver	1	.10
	28	1204058	Stud, Driver	1	.09
	32	1206908	Driver	1	1.80
	41	1205783	Bracket Dual Transport Sys Correcting	1	1.85
	115	151720	Set Screws	2	pp14
26	55	1290577	Bracket, Dual Pitch FTB	1	.65

NOTE: A B/M will be available at a later date.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: 1 Hr.

Use Applicable Service Code

369 RELIABILITY

7-12-78

Model(s): 8X5

(Revised) 2-28-79

SUBJECT: Correcting Mechanism — Molded Plastic Front Carrier Support And Floating Torque Bar (FTB) Adjustments

OBSOLETE. Refer to CEM No. 386.

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370 SERVICE INFORMATION

8-23-78

Model(s): 7XX, 8XX

SUBJECT: Operational Interposer Restoring Bail — Redesigned

PURPOSE: The operational interposer restoring bail has been redesigned (25-216).

The new bail will fit on the outside of the interposer cage. The stud will be inserted from the outside and the retainer clip on the inside of the operational cage (Fig. 1).

The index operational interposer spring (25-210) must be changed. The new spring (25-210) has the same spring tension. The diameter is smaller so it will not interfere with the lug on the right side of the interposer bail.

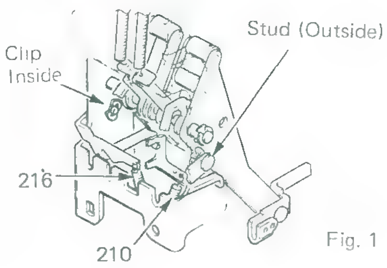

Fig. 1

ADJUSTMENTS: Remain the same.

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
25 210	1256445	Spring	1	02
216	1256444	Bail	1	.25

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

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371

SERVICE INFORMATION

8-23-78

Model(s): 7XX And 8XX

SUBJECT: Solid Balance Arm Conversion

Former level adjustable balance arm is no longer available. Orders will be substituted to the solid balance arm.

SOLUTION: When installing the solid balance arm in the old level rotate bellcrank (23-220), install the two washers as shown (Fig. 1).

Note: The solid balance arm and the one piece rotate arm are compatible, reference "Selectric" CEM 340.

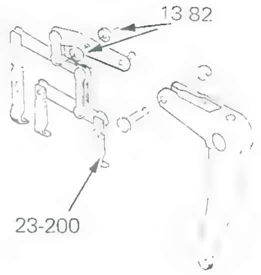


Figure 1

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
13 82	1092017	Washer	2	.01
23 200	1290667	Solid Balance Arm	1	1.95

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

372

SERVICE INFORMATION

10-18-78

Model(s): 7XX, 8XX

SUBJECT: Index Multiplying Lever Mounting Stud B/M

PURPOSE: Provide a replacement for the multiplying lever mounting stud.

SYMPTOM: Broken rivet in index multiplying lever.

SOLUTION: Replace broken multiplying lever rivet with the stud B/M (25-324) (Figure 1). Individual parts will not be available.

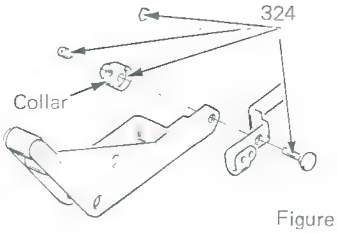


Figure 1

ADJUSTMENTS: Adjust collar for no end play.

Note: The lip on the collar engages the rear of the cam follower to prevent the rotation of the collar.

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
25 324	1256475	Multiply Lever, Mounting Stud B/M	1	4.65

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .5 Hrs.

Use Applicable Service Code

373

SERVICE INFORMATION

10-18-78

Model(s): Dual Pitch Machines

(Revised) 2-28-79

SUBJECT: Tab Set And Clear Bracket

When replacing the grease filled tab rack with the friction rack (19-31) in machines with tie rod paper feed, the set-clear bracket (19-2) should not be changed. The new bracket (19-2) will interfere with the tie rod frame. The old style bracket can be adjusted for proper operation.

374

RELIABILITY

10-18-78

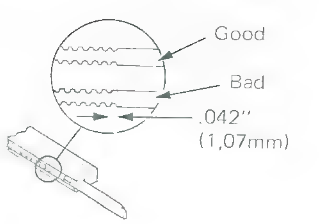
Model(s): 87X, 89X

SUBJECT: Dual Pitch Margin/Escapement Racks — Teeth Cut Incorrectly

PURPOSE: This condition may appear on margin racks (10-22) or escapement racks (7-10). Working surfaces of 10 and 12 pitch rack teeth should line up at position zero, and should repeat at 1/2 inch intervals thereafter. This relationship may be off by as much as .042" (1,07mm) on the defective racks (Figure 1).

SYMPTOM: Unable to adjust overbank in both 10 and 12 pitch. To check for a defective rack, observe the zero position rack teeth while switching between 10 and 12 pitch. (Make a reference mark or scribe line on the rail.) The working surface of the 10 and 12 pitch teeth should not appear to change positions on a good rack.

SOLUTION: If there is a difference between 10 and 12 pitch rack teeth at position zero, change the rack.



Note: Margin Rack Shown; Observe Escapement Rack In Similar Manner

Fig. 1

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
7 10	1206844	8 X 3 ESC Rack, Level 3	1	4.80
	1206845	8 X 5 ESC Rack, Level 3	1	5.15
10 22	1205537	Rack, Margin 8 X 3	1	2.80
	1205538	Rack, Margin 8 X 5	1	3.00

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32

This CEM Expires 9-1-79

375

SERVICE INFORMATION

11-1-78

Model(s): 8XX With Selective Ribbon

SUBJECT: Flaking And/Or Excessive Ribbon Dust

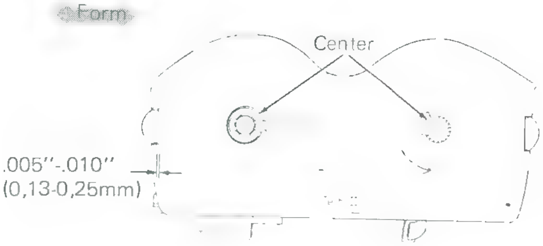
PURPOSE: Checks and adjustments to minimize flaking and excessive ribbon dust when using correctable film/carbon film ribbon.

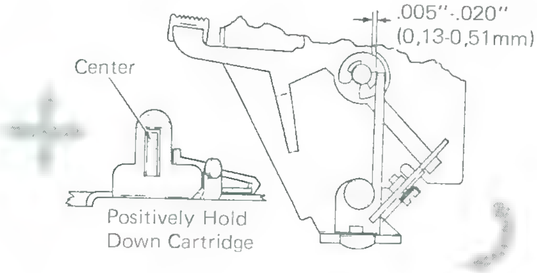
SYMPTOM: Carbon specks on original, or excessive ribbon dust buildup in the carrier.

SOLUTION:

Make the following ribbon mechanism adjustments to minimize flaking and buildup of ribbon dust.

1. Clean Carrier And Ribbon Area — All carbon buildup must be removed from lift guides. Lubricate lift guides with light film of no. 23 grease on sliding surfaces.
   Note: An excessive carbon dust buildup in the carrier area can identify a problem. Inspect the parts and adjustments around the carbon buildup. This must be cleaned from the machine to avoid transferring to the paper.
2. Cartridge Guides (15-86) And Cartridge Retaining Springs (15-59) — Check for proper centering and positive latching of cartridge.





Continued

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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381 **SERVICE INFORMATION** 1-31-79

Model(s): All "Selectric" Typewriters Equipped With Spring Bias Tilt Rings

SUBJECT: Rotate Selection Adjusting Tool (P/N 9900633)

PURPOSE:

1. Faster adjustment procedure.
2. More accurate adjustments.
3. To determine if machine is within specification without element.

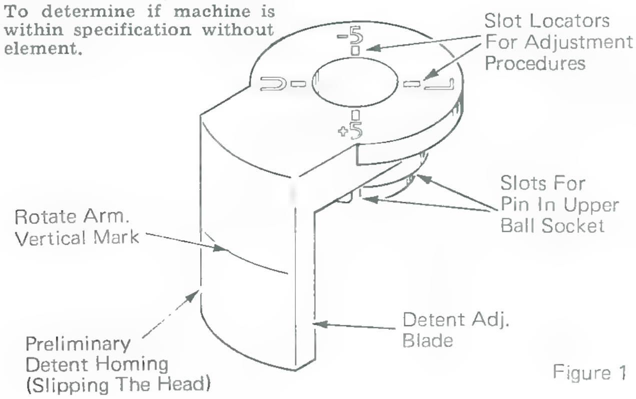
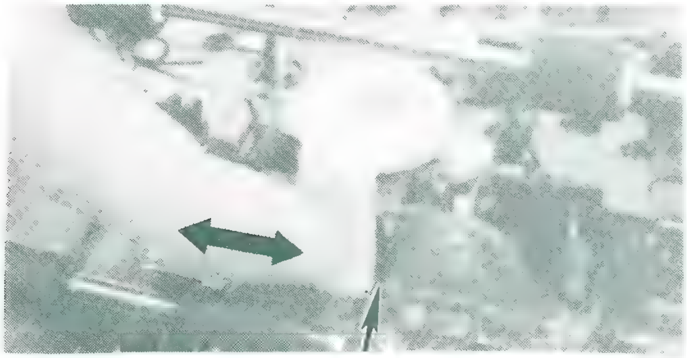

-5
U
L
+5
Slot Locators For Adjustment Procedures
Slots For Pin In Upper Ball Socket
Rotate Arm. Vertical Mark
Preliminary Detent Homing (Slipping The Head)
Detent Adj. Blade

Figure 1

HOW TO USE TOOL PROPERLY

Proper adjustment is obtained with the rotate adjusting tool when the following two conditions are met:

1. **No clearance exists between the blade of the rotate tool and the rotate detent** (Fig. 2).

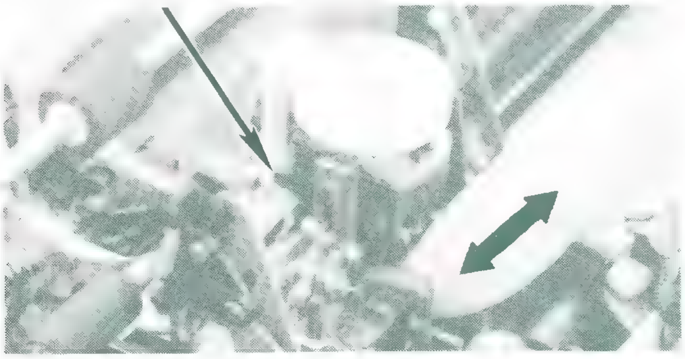


No Clearance Between Detent And Blade Of Tool
CORRECT Method To Check Adjustment

Figure 2

2. **Detent should restore with no binds against the blade of the tool** (Fig. 3).

Detent Restores With No Binds



Note: Check Detent Guide For Binds

Figure 3

Since the entry of the rotate detent is controlled by correct seating of the tilt detent, it is necessary that the tilt detenting be set up first.

7XX "Selectrics" equipped with the wear compensator cannot be adjusted with the rotate selection adjusting tool unless the compensator arm is disabled using the procedure found on page 59 in the "Selectric" Service Manual, F/N 241-5615.

CAUTION: It is possible for the blade of the tool to bind against the backup shoe on the tilt ring. Therefore, it will be necessary to remove the tool before half cycling the machine for the next adjustment.

The following adjustments replace Frames 65-75 of the "Selectric" APM, F/N 241-5939.

PRELIMINARY ADJUSTMENTS

ROTATE ARM VERTICAL

This is a preliminary adjustment and is made by adjusting the turnbuckle on the rotate link. Adjust the link so that the center of the top of the rotate arm is in line with the scribe line on the blade of the rotate tool (Fig. 4). Tilt the machine in the service position and observe from the bottom of the machine.

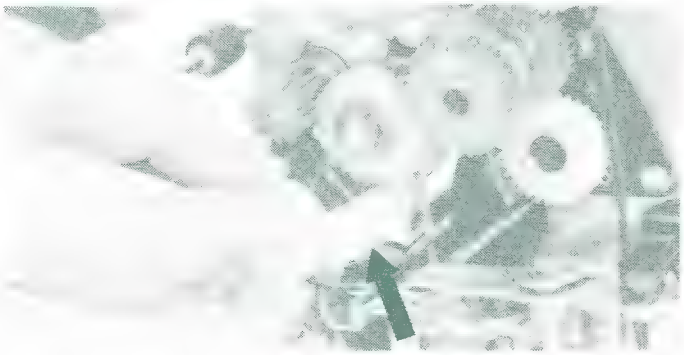
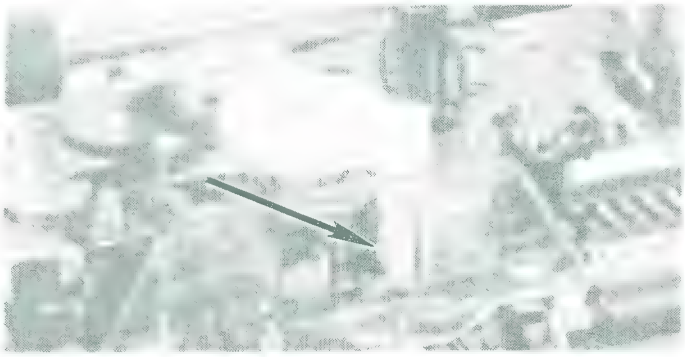


Figure 4

PRELIMINARY HOMING

Half cycle an UPPER CASE "I" with the carrier positioned over the cycle shaft area to aid in loosening the rotate pulley screw. Install the rotate tool with the pin on the upper ball socket located in the "U" (uppercase) slot in the rotate tool (Fig. 5). Loosen the setscrew in the rotate pulley and then turn the tool in a clockwise direction until it touches the rotate detent and hold it in this position while tightening the setscrew.

Note: This is the only time the tool will be used on this side of the rotate detent (Fig. 5).



Hold Blade Of Tool Against Detent -- Do Not Check For Clearance Between Blade And Detent For This Adjustment Only

Figure 5

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ADJUSTMENT PROCEDURE

1. **Zero Rotate** — With the machine in UPPER CASE half cycle a "1/4" (zero rotate, tilt 2). Install the tool with the pin on the upper ball socket in the U slot of the rotate tool. Adjust the turnbuckle so that no clearance exists between the blade of the rotate tool and the rotate detent (Fig. 6). Detent must restore with **no binds.**

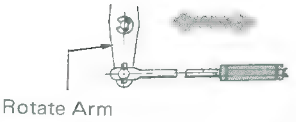


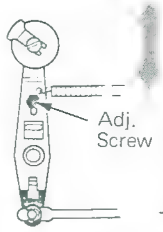
Figure 6

   Note: Leave the turnbuckle loose at this time.

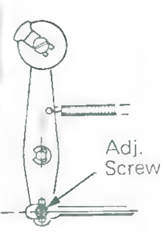
   Remove tool.

2. **+5 Motion** — Half cycle an UPPER CASE "W" (+5 rotate, tilt 2) and install the rotate tool with the pin on the upper ball socket in the +5 slot of the rotate tool.

   Adjust the link up or down on the rotate arm to remove all clearance between the blade of the rotate tool and the rotate detent without binding the detent (Fig. 7, Fig. 8).



Two Piece Rotate Arm
Figure 7



Solid Rotate Arm
Figure 8

   Remove tool.

3. a. **−5 Motion** — Half cycle an UPPER CASE "M" (−5 rotate, tilt 2) and install the rotate tool with the pin on the upper ball socket in the −5 slot of the tool. Readjust the turnbuckle to remove all clearance between the blade of the rotate tool and the rotate detent. The detent must restore with **no binds.** Tighten the turnbuckle (Fig. 9).

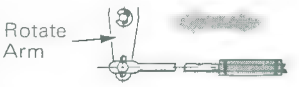


Figure 9

   Remove tool.

   b. Next half cycle an UPPER CASE "1/4" (zero rotate, tilt 2) and install the rotate tool with the pin on the upper ball socket in the U slot of the rotate tool. Adjust the −5 stop screw for no clearance and no binds between the blade of the tool and rotate detent (Fig. 10).

   Note: This adjustment is used for both the adjustable and solid balance arm. It is not necessary to preset the two-piece balance arm.

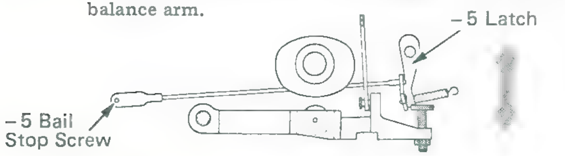


Figure 10

   Adjusting the −5 stop screw up decreases the clearance between the blade of the tool and the detent.

   Remove tool.

4. **Shift Motion** — With the machine in LOWER CASE half cycle a "1/2" (zero rotate, tilt 2). Install the rotate tool with the pin on the upper ball socket in the L slot in the rotate tool. Adjust the shift stop screw in or out for no clearance and no binds between the blade of the tool and rotate detent (Fig. 11).

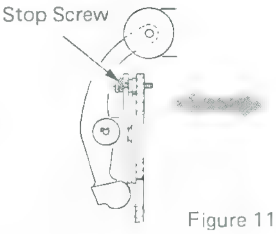


Figure 11

   Remove tool.

DIAGNOSTIC TIPS

1. All rotate latches should restore at approximately the same time the check pawl latches in the cycle clutch.
2. The −5 stop screw can be preset by turning it in until it bottoms and then by backing it out 1/2 turn.
3. Check following areas:
   - a. Skirt clearance
   - b. Detent timing
   - c. Rotate detent guide binding
   - d. Rotate spring tension
   - e. Excessive head play (worn dog bone): This can be checked after making the adjustment in step 1 of the adjustment procedure. Remove tool and install a good element. Half cycle a "1/4" and withdraw the rotate detent and turn the element counterclockwise. Release the detent; it should not enter the next tooth. If the detent does enter the next tooth, the head play is excessive and the dog bone and the upper and lower ball socket should be replaced.
   - f. Binding rotate arm stud (unable to raise stud high enough in slot in rotate arm)

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382 SERVICE INFORMATION

2-28-79

Model(s): 7XX, 8XX

SUBJECT: Repeat Row Four Keylever — Plant Installed

The row four repeat keylever (21-108) has been redesigned for greater reliability and ease of installation. It is now available for **PLANT INSTALLATION** on new machines through Special Engineering Request (SER). An SER must be submitted at the time the new machine is ordered. Plant installation is the recommended procedure.

Replacement parts must also be ordered by SER.

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383 RELIABILITY

2-28-79

Model(s): 721

SUBJECT: Escapement Racks — Soft

SYMPTOM: Failures caused by premature wear of 721 escapement rack (6-27) may appear in:

1. Backspace
2. Escapement (skipping)
3. Overbank (uneven margin)
4. Tab (uneven columns and/or button hard to depress)

SOLUTION: Replace rack.

MACHINES AFFECTED: 12 pitch S/N: 0808000 — 0817000, 10 pitch S/N: 0784000 — 0817000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: No soft racks are in field stock.

Estimated Installation Time: .5 Hr.

Use Service Code 32

This CEM Expires 3-1-80

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384 SERVICE INFORMATION

2-28-79

Model(s): 8XX

SUBJECT: Pointers, "Selectric" II — Redesigned

Pointers (09-136) (10-37) for the "Selectric" II have been redesigned. The indicator portion is narrower and can be used on either single or dual pitch. Teeth have been added to the bottom to reduce chances of the pointer coming out of its holder (Figure 1). The new pointers are compatible with all "Selectric" II holders.

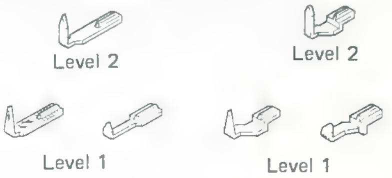

Figure 1

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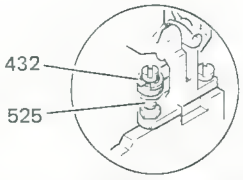
385 SERVICE INFORMATION

2-28-79

Model(s): All "Selectrics"

SUBJECT: Detent Actuating Lever Support Screw — Redesigned

The detent actuating lever screw (02-525) has been redesigned. The shouldered nut (02-522) has been replaced with a "C"-clip (02-432) (Figure 1). The new level screw is compatible with all carriers.



(Rear View) Figure 1

Loosen the locking nut (02-526) and adjust screws (02-525) with screwdriver.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	432	1092125	"C"-Clip	1	PP3
	525	1256453	Screw, Support	1	*

386 RELIABILITY

2-28-79

Model(s): Correcting "Selectric" 8X5

SUBJECT: Correcting Mechanism Front Carrier Support And Torque Bar Asm. Changed From Plastic To Metal

SYMPTOM: Correcting failures on machines with the molded plastic carrier support and torque bar (26-130).

SOLUTION: Replace with the metal asm.

The adjustments for the metal support and torque bar can be located in CEM No. 310.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
26	130	1290607	Support Asm.	1	5.15

MACHINES AFFECTED: All correcting "Selectrics" with the plastic carrier support (between S/N: 3795000—6170000).

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: The plastic support and torque bar are no longer available. There is a low availability of parts; order parts on as needed basis.

Use Service Code 32

This CEM Expires 1-31-80

387 RELIABILITY

2-28-79

Model(s): Correcting "Selectric"

SUBJECT: Margin Bellcrank

PURPOSE: To stop unwanted correcting tape feed when typing through right hand margin.

SYMPTOM: As the carrier moves past the right hand margin, the bellringer bellcrank (10-8) will contact the inhibitor actuator bellcrank (26-126) when the margin release is activated. This will cause the correcting tape to feed a few spaces.

SOLUTION: Form the bellringer bellcrank (10-8) toward the front of the machine (Figure 1) to provide minimal clearance between the bellringer bellcrank and the inhibitor actuator bellcrank. After forming recheck adjustment 314 in the "Selectric" APM F/N 241-5939.

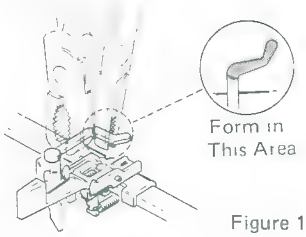


Figure 1

Note: Caution should be used when forming bellcrank.

MACHINES AFFECTED: 8X3, 1979400 — 5033700; 8X5, 3838600—6104400.

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CEM Customer Engineering Memorandum

"Selectric" Typewriter
7XX [21] 8XX [26]

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386 RELIABILITY

2-28-79

Model(s): Correcting "Selectric" 8X5

SUBJECT: Correcting Mechanism Front Carrier Support And Torque Bar Asm. Changed From Plastic To Metal

SYMPTOM: Correcting failures on machines with the molded plastic carrier support and torque bar (26-130).

SOLUTION: Replace with the metal asm.

The adjustments for the metal support and torque bar can be located in CEM No. 310.

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
26 130	1290607	Support Asm.	1	5.15

MACHINES AFFECTED: All correcting "Selectrics" with the plastic carrier support (between S/N: 3795000—6170000).

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: The plastic support and torque bar are no longer available. There is a low availability of parts; order parts on as needed basis.

Use Service Code 32

This CEM Expires 1-31-80

387 RELIABILITY

2-28-79

Model(s): Correcting "Selectric"

SUBJECT: Margin Bellcrank

PURPOSE: To stop unwanted correcting tape feed when typing through right hand margin.

SYMPTOM: As the carrier moves past the right hand margin, the bellringer bellcrank (10-8) will contact the inhibitor actuator bellcrank (26-126) when the margin release is activated. This will cause the correcting tape to feed a few spaces.

SOLUTION: Form the bellringer bellcrank (10-8) toward the front of the machine (Figure 1) to provide minimal clearance between the bellringer bellcrank and the inhibitor actuator bellcrank. After forming recheck adjustment 314 in the "Selectric" APM F/N 241-5939.

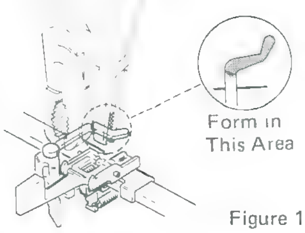

Figure 1

Note: Caution should be used when forming bellcrank.

MACHINES AFFECTED: 8X3, 1979400 — 5033700; 8X5, 3838600—6104400.

388 SERVICE INFORMATION

3-14-79

Model(s): 7XX, 8XX

SUBJECT: Motors

All "Selectric" motors will be shipped without motor mounts and without the tape on the bottom after depletion of current stock. When ordering a motor also order the correct level motor mounts. The tape is no longer required.

389 SERVICE INFORMATION

3-14-79

Model(s): 8XX

SUBJECT: Machine Idle Noise

SYMPTOM: Excessive cover vibration and motor noise.

SOLUTION: Remove the rubber shipping bumper located on the front of the left mounting bracket (Figure 1). Refer to Combined Service Information, page 23, item 1, for further information on idle noise.

Note: A method of removing the bumper is to cut the external tip off and push the other end out with a screwdriver.

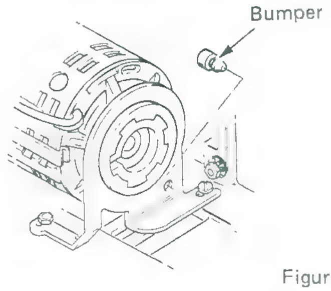

Figure 1

3-14-79

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CEM Customer Engineering Memorandum

"Selectric" Typewriter
7XX [21] 8XX [26]

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A complete set of current "Selectric" Typewriter CEM materials consists of "Selectric" Combined Service Information booklet (F/N 241-5114-1) dated May, 1979, CEMs starting on page one (reissued 7-3-79) and the Technical Information Index found in the back of the Part Number/Price List (F/N 241-5103).

300 SERVICE INFORMATION

10-8-75

Model 8XX

FEED GEAR ADJUSTMENT – SELECTIVE RIBBON

When replacement of feed gear (15-092) and intermediate gear (15-055) is necessary due to wear of the teeth, be sure the ribbon mode button grip clip is adjusted up or down on the ribbon feed post for .005"-.020" clearance between the lower feed gear and the first intermediate gear (with the mechanism in the film ribbon mode). The bottom of the large ribbon feed gear should be flush with the bottom of the small first intermediate gear.

FILM RIBBON MODE

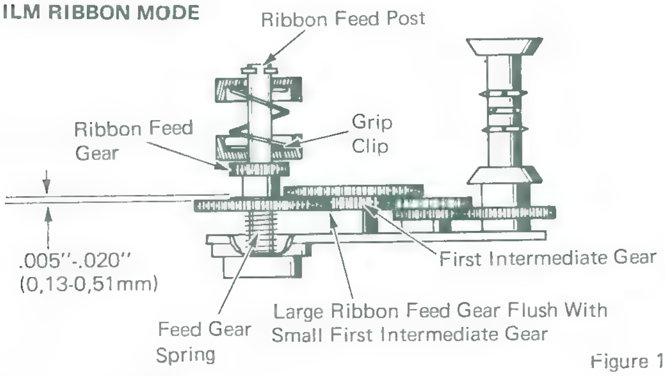


Figure 1

If adjustment is necessary—

a. Ensure the load lever spring clears the ribbon feed gear with a minimum of .005" in the ribbon load position. Form the load lever spring.

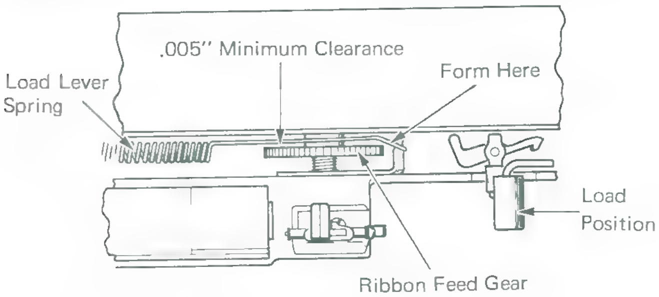


Figure 2

b. Ensure the loadlever spring clears the ribbon cartridge in the operated position. Form spring if necessary.

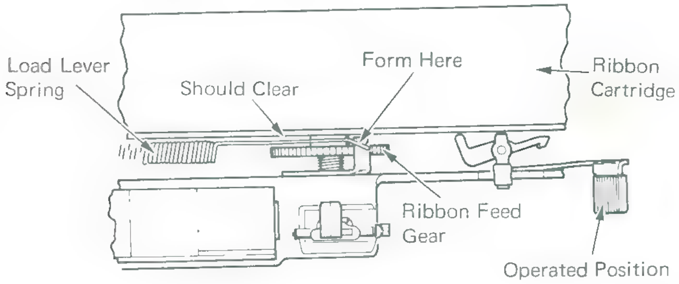


Figure 3

349 SAFETY

8-24-77

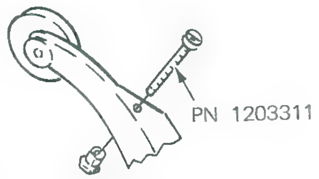
Model(s): 725

SUBJECT: Shift Adjusting Screw.

SAFETY LOCATION: Some reconditioned 725 "Selectric" machines have reached the field with a bristol head lower case adjusting screw in the shift arm. This bristol could cause hand injury when using the hand cycle wheel.

SAFETY PRECAUTION: Check lower case shift adjusting screw on next service call.

SAFETY CORRECTIVE ACTION: Replace bristol-type adjusting screw with fillister head screw (P/N 1203311).



Note: This change applies only to reconditioned 725's that were converted from Selectric I/O's. Part references are shown in the MT/ST—I/O APM (16-49, P/N 1203311).

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .2

Use Service Code 32 **This CEM Expires 7-1-80**

362 RELIABILITY

5-3-78

Model(s): 8XX

SUBJECT: Torque Limiter Arbor – Defective

PURPOSE: Some machines may have reached the field with edge of the torque limiter arbor (25-11) rounded (Figure 1).

SYMPTOM: The rounded edge may allow the torque limiter spring (25-09) to drop between the hub (25-03) and arbor.

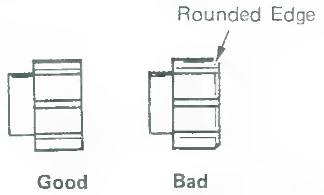


Figure 1

SOLUTION: Change arbor.

MACHINES AFFECTED: 8X5/3688555 — 3721131, 8X3/1921645 — 1933765.

Use Service Code 32 **This CEM Expires 5-3-79**

365 RELIABILITY

5-31 78

Model(s): 8XX Selectrics

(Revised) 7-12 78

SUBJECT: Double Index – Plant Installed

PURPOSE: To identify wrong parts installed in double index mechanism.

SYMPTOM: With incorrect parts installed, the index mechanism may cycle only once or might give extra cycles.

SOLUTION: Check the index bellcrank (20-14) and the index latch (03-405). The double index parts shown below should be installed to correct unreliable cycling of the operational cam.

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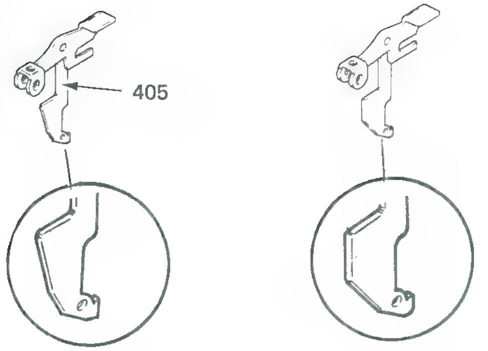
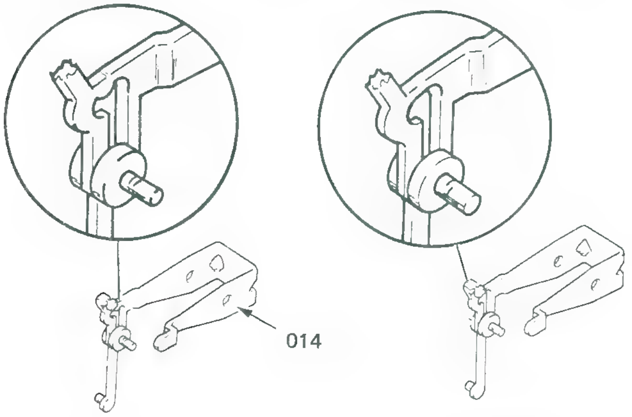


Double Index Latch

Standard Latch

Fig. 1



Double Index Bellcrank

Standard Bellcrank

Fig. 2

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
03	405	1287869	Latch 7X1	1	1.75
		1287870	Latch XX3, XX5	1	1.75
20	14	1287871	Bellcrank XX3	1	1.90
		1287872	Bellcrank XX5	1	1.85

MACHINES AFFECTED: 7X1 — Below approx. 0695967, 8X3 — below approx. 1762633, 8X5 — below approx. 3326186.

ESTIMATED INSTALLATION TIME: 1.0 Hr.

Use Service Code 32

This CEM Expires 5-31-79

366

RELIABILITY

7-12-78

Model(s): 8X3 Selectric Typewriters

SUBJECT: Court Reporting Platen

PURPOSE: To identify incorrectly ground platens. Court reporting platens are identified with an "0" stamped in the left end plug. Some court reporting platens (12-16) may have reached the field ground to the same diameter as a standard platen and still have the "0" identification.

SYMPTOM: Experiencing incorrect linespacing, when all adjustments appear correct and a "0" is stamped in the end plug of the platen.

SOLUTION: Replace the platen.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
12	16	1290726	Court Reporting Platen	1	25.00

MACHINES AFFECTED: Approximately 8X3 above 26-1904200.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .2 Hr.

Use Service Code 17

This CEM Expires 7-12-79

367

RELIABILITY

7-12-78

Model(s): All

SUBJECT: Ball Joint — Out Of Spec.

PURPOSE: Some machines have reached the field with the ball joint (02-414) machined too short on one end and/or the slots cut in an "X" pattern on one end.

SYMPTOM: When experiencing malselection or rotate problems and all adjustments appear correct, check the ball joint.

SOLUTION: Change ball joint.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	414	1124220	Ball Joint	1	1.85

MACHINES AFFECTED: 7X1 0734400 — 0743100, 8X3 1874200 — 1904200, 8X5 3577300 — 3648600

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .1 Hr.

Use Service Code 32

This CEM Expires 7-12-79

374

RELIABILITY

10-18-78

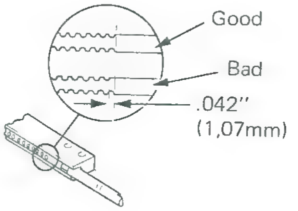
Model(s): 87X, 89X

SUBJECT: Dual Pitch Margin/Escapement Racks — Teeth Cut Incorrectly

PURPOSE: This condition may appear on margin racks (10-22) or escapement racks (7-10). Working surfaces of 10 and 12 pitch rack teeth should line up at position zero, and should repeat at 1/2 inch intervals thereafter. This relationship may be off by as much as .042" (1,07mm) on the defective racks (Figure 1).

SYMPTOM: Unable to adjust overbank in both 10 and 12 pitch. To check for a defective rack, observe the zero position rack teeth while switching between 10 and 12 pitch. (Make a reference mark or scribe line on the rail.) The working surface of the 10 and 12 pitch teeth should not appear to change positions on a good rack.

SOLUTION: If there is a difference between 10 and 12 pitch rack teeth at position zero, change the rack.



Note: Margin Rack Shown; Observe Escapement Rack In Similar Manner

Fig. 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
7	10	1206844	8 X 3 ESC Rack, Level 3	1	4.80
		1206845	8 X 5 ESC Rack, Level 3	1	5.15
10	22	1205537	Rack, Margin 8 X 3	1	2.80
		1205538	Rack, Margin 8 X 5	1	3.00

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32

This CEM Expires 9-1-79

377

SERVICE INFORMATION

11-29-78

Model(s): 7XX, 8XX

(Revised) 12-13-78

SUBJECT: Platen Knobs

Level 2 platen knobs (12-55) are now being manufactured with the setscrews in line to reduce possibility of knob loosening. The Level 2 knob can only be used on platens with a flat side on the right shaft (Fig. 1). Level 1 knobs are to be used with Level 1 platens.

NOTE: Use correct part numbers below.

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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382 SERVICE INFORMATION

2-28-79

Model(s): 7XX, 8XX

SUBJECT: Repeat Row Four Keylever — Plant Installed

The row four repeat keylever (21-108) has been redesigned for greater reliability and ease of installation. It is now available for **PLANT INSTALLATION** on new machines through Special Engineering Request (SER). An SER must be submitted at the time the new machine is ordered. Plant installation is the recommended procedure.

Replacement parts must also be ordered by SER.

383 RELIABILITY

2-28-79

Model(s): 721

SUBJECT: Escapement Racks — Soft

SYMPTOM: Failures caused by premature wear of 721 escapement rack (6-27) may appear in:

1. Backspace
2. Escapement (skipping)
3. Overbank (uneven margin)
4. Tab (uneven columns and/or button hard to depress)

SOLUTION: Replace rack.

MACHINES AFFECTED: 12 pitch S/N: 0808000 — 0817000, 10 pitch S/N: 0784000 — 0817000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: No soft racks are in field stock.

Estimated Installation Time: .5 Hr.

Use Service Code 32 This CEM Expires 3-1-80

384 SERVICE INFORMATION

2-28-79

Model(s): 8XX

(Revised) 5-9-79

SUBJECT: Pointers, "Selectric" II — Redesigned

Pointers (09-136) (10-37) for the "Selectric" II have been redesigned (Figure 1). The universal pointers are narrower and can be used on either dual or single pitch. Teeth have been added to the bottom to reduce chances of the pointer coming out of its holder. The new pointers are compatible with current pointer holders (09-140) (10-41).

The current part number for dual pitch pointers will be used for the new universal pointers. Existing stock of level 1 pointers will be used until depleted. Orders for level one pointers will be substituted to the level two universal pointers when parts become available.

Note: Pointers for machines with factory sound are not affected by this change.

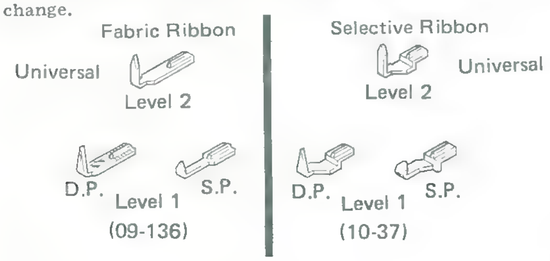

Figure 1

385 SERVICE INFORMATION

2-28-79

Model(s): All "Selectrics"

SUBJECT: Detent Actuating Lever Support Screw — Redesigned

The detent actuating lever screw (02-525) has been redesigned. The shouldered nut (02-522) has been replaced with a "C"-clip (02-432) (Figure 1). The new level screw is compatible with all carriers.

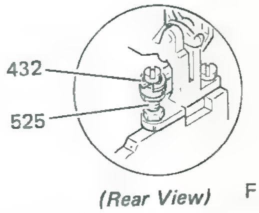

Figure 1

Loosen the locking nut (02-526) and adjust screws (02-525) with screwdriver.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	432	1092125	"C"-Clip	1	PP3
	525	1256453	Screw, Support	1	*

386 RELIABILITY

2-28-79

Model(s): Correcting "Selectric" 8X5

SUBJECT: Correcting Mechanism Front Carrier Support And Torque Bar Asm. Changed From Plastic To Metal

SYMPTOM: Correcting failures on machines with the molded plastic carrier support and torque bar (26-130).

SOLUTION: Replace with the metal asm.

The adjustments for the metal support and torque bar can be located in the APM.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
26	130	1290607	Support Asm.	1	5.15

MACHINES AFFECTED: All correcting "Selectrics" with the plastic carrier support (between S/N: 3795000—6170000).

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: The plastic support and torque bar are no longer available. There is a low availability of parts; order parts on as needed basis.

Use Service Code 32 This CEM Expires 1-31-80

387 RELIABILITY

2-28-79

Model(s): Correcting "Selectric"

(Revised) 5-9-79

SUBJECT: Margin Bellcrank

PURPOSE: To stop unwanted correcting tape feed when typing through right hand margin.

SYMPTOM: As the carrier moves past the right hand margin, the bellringer bellcrank (10-8) may contact the inhibitor actuator bellcrank (26-126) when the margin release is activated. This can cause the correcting tape to feed a few spaces.

SOLUTION: Remove (stone, file, or grind) approximately .050" (1.27 mm) of the bellcrank in the area shown (Figure 1) to provide minimal clearance between the bellringer bellcrank (09-106), (10-8) and the inhibitor actuator bellcrank (26-126). (The tip of the bellringer bellcrank should be kept round when removing material.) After making this change check adjustment of the linelock bracket (09-5), and the linelock bail finger (09-80). Redesigned parts will be available at a later date to eliminate need for this procedure.

Note: The bellcrank is a hardened part and forming is NOT RECOMMENDED.

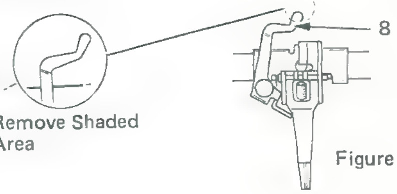

Figure 1

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388

SERVICE INFORMATION

Model(s): 7XX, 8XX

SUBJECT: Motors

All "Selectric" motors will be shipped without motor mounts and without the tape on the bottom after depletion of current stock. When ordering a motor also order the correct level motor mounts. The tape is no longer required.

389

SERVICE INFORMATION

3-14-79

Model(s): 8XX

(Revised) 5-9-79

SUBJECT: Machine Idle Noise

SYMPTOM: Excessive cover vibration and motor noise.

SOLUTION: If experiencing excessive machine noise, the rubber shipping bumper (11-511) located on the front of the left mounting bracket could possibly contribute to the problem. There should be a clearance between the bumper and the motor. If there is no clearance, reposition the motor and/or remove the bumper (Figure 1). Refer to Combined Service Information, page 23, item 1, for further information on idle noise.

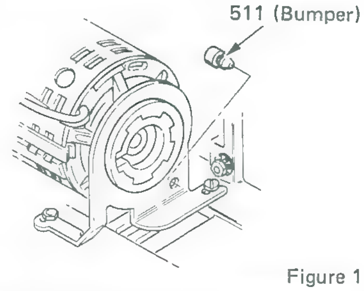


Figure 1

Note: A method of removing the bumper is to cut the external tip off and push the other end out with a screwdriver.

390

SERVICE INFORMATION

5-9-79

Model(s): 7XX, 8XX

SUBJECT: Pinfeed Platen — "D" Shaped Pins

PURPOSE: The diameter of the pins (49-101) has been increased from .140" to .162" (3.56 to 4.11 mm) and are now "D" shaped (Figure 1). This will make the pin size agree with paper industry standards and maintain compatability with previous level platen core lengths.

SYMPTOM: Print quality (i.e., tails or smearing) and/or alignment not consistent.

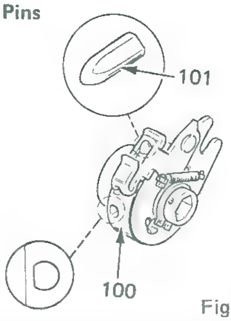


Figure 1

SOLUTION: Replace both pin wheel assemblies (49-130). The part numbers for the new assemblies remain the same as the standard pin wheel assemblies.

Note: High lift pin wheel assemblies and previous level standard pin wheels will no longer be available. If replacement of old level pin wheels or parts (high lift or standard) is necessary, both sides should be replaced with the "D" shaped pin wheels.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
49	100	1256158	Pin Wheel Hub R.H.	1	5.50
		1256159	Pin Wheel Hub L.H.	1	5.50
	101	1256157	Pin, "D" Shaped	9	.08
	130	1203781	Pin Wheel Asm. R.H.	1	16.50
		1203782	Pin Wheel Asm. L.H.	1	16.50

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hr.

Use Applicable Service Code

391

SERVICE INFORMATION

5-9-79

Model(s): 8XX – With Rotary Backspace

SUBJECT: Uneven Left Margin

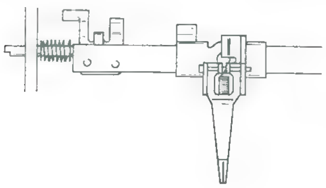
PURPOSE: Checks and adjustments to help resolve difficult overbank problems when margin, carrier return, and escapement adjustments appear correct.

SYMPTOM: Uneven left margin.

SOLUTION: If failure occurs at ANY position of the left margin stop, follow procedures in section A. If the failure occurs only between 0 and 30 on the margin scale, follow procedure in section B.

Note: The symptoms and solutions listed are the most common, but each problem is unique and may require use of section A and/or B.

A. 1. APM frames 150 through 161 should be adjusted to specifications, note the following:
  a. Frame 151 — Adj. for min. pawl clearance. PAWL MUST NOT DRAG while returning.
  b. Frame 156 — Check the overbank guide adjustment while biasing the tip of the LH margin set lever in a counterclockwise direction. This simulates the dynamic forces present during a machine powered carrier return. Ensure the switch pitch gear (DP) (10-29) or collar (single pitch) does not interfere with this adjustment.



  c. Frame 160 — Adjust the torque limiter to low side of spec for minimum return force with positive drive.

2. APM frames 333 through 343 should be adjusted to specifications, note the following:
  a. Frame 336 — Make this adjustment while holding rail to right and remove play in rack to left.

B. Adjust the escapement mechanism as outlined in CEM No. 334, with the following additional checks and adjustments.

1. The escapement rack bracket (DP machines) (07-20) must be positioned to prevent bowing of the escapement rack.

   Loosen switch pitch selector gear (APM frame 90) to relieve pressure on the escapement rack gear. Loosen bracket (7-20) and allow escapement rack to assume natural rest position. Tighten bracket (7-20) without disturbing escapement rack rest position. Readjust APM, frame 90.

2. Check the escapement and margin racks as described in CEM No. 374.

Note: The carrier buffer (CEM No. 320) may be installed to increase carrier stability on marginally reliable machines. This is not recommended as a substitute for replacement of worn parts in the print sleeve/shaft area. Parts should be replaced if worn and the buffer used only on machines that appear unreliable after the above steps were taken.

392

SERVICE INFORMATION

5-9-79

Model(s): 8XX Single Pitch (Non-Rotary Backspace Machines)

SUBJECT: Carrier Return Latch – Redesigned

PURPOSE: Two additional holes have been added to the carrier return latch (03-207). One is an additional hole for the carrier return unlatching link (03-202) and the other is a hole to anchor the latch spring (03-205) (Figure 1).

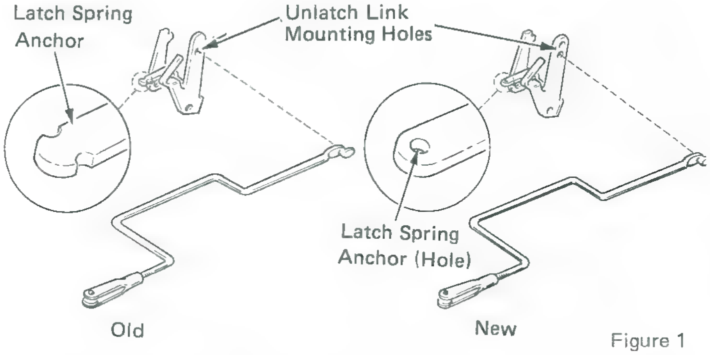


Figure 1

SYMPTOM: Machines with this level carrier return mechanism were produced with one hole for the carrier return unlatching link (03-202) and may not provide enough motion to reliably unlatch the carrier when adjustments appear correct. The latch spring (03-205) anchor lug could allow the spring to slide up the lug.

SOLUTION: Replace the latch (03-207) and reconnect the unlatching link (03-202) in the lower hole and attach the latch spring to the hole in the anchor lug. The part number and adjustments remain the same.

Parts Information: Part number remains the same.

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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393 RELIABILITY

5-9-79

Model(s): 8XX

SUBJECT: Acoustical Hood Seal — Redesigned

PURPOSE: Acoustical hood seal has been redesigned for more durability and greater reliability.

SOLUTION: The new seal is a friction fit part that snaps on. Install as shown in Figure 1. Plant installed hoods will have the seal glued on for shipping purposes. If it becomes necessary to glue the seal, Eastman 910® or a similar type adhesive may be used.

Note: Do not get adhesive on the visible surface of the hood. Use safety precautions when using adhesives.

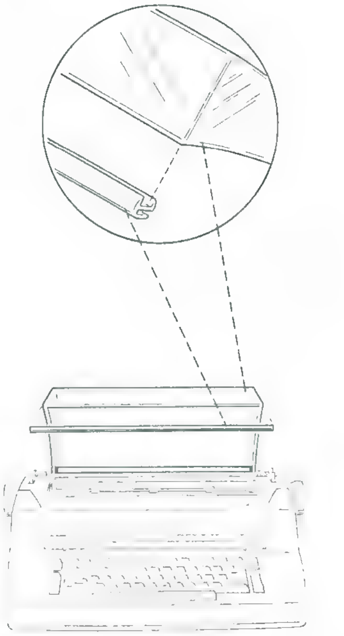


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
30	2	1205609	Seal Hood 8X3	1	.35
	2	1205608	Seal Hood 8X5	1	.30

Parts Information: Seal will be added to B/M (30-31) when stock is available.

394 SERVICE INFORMATION

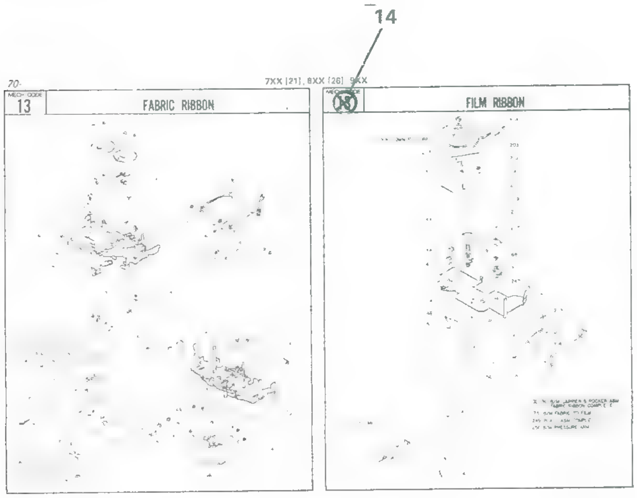
6-20-79

Model(s): 7XX, 8XX

SUBJECT: Adjustment Parts Manual (APM) (F/N 241-5939-1) — Correction

The mechanism code for the film ribbon frame on page 70 is incorrectly listed as 13. It should be mechanism 14.

Mark this change in your Adjustment Parts Manual (Figure 1).



14

70-

7XX [21], 8XX [26] 9XX

MECH CODE 13 FABRIC RIBBON

MECH CODE ~~13~~ FILM RIBBON

Figure 1

395 SERVICE INFORMATION

7-18-79

Model(s): 8XX

SUBJECT: Dual Transport Conversion

PURPOSE: Conversion from the steel cable transport system to the dual transport system is now possible without removing the backplate assembly. The following procedure and parts listed will reduce conversion time.

REMOVALS:

1. Remove — Covers, platen, deflector and RH dust shield
2. Remove — Switch from switch bracket
3. Remove — C/R cable and tab cable
4. Remove — Mainspring
5. Remove — C/R shoe bracket (03-500)
6. Remove — Escapement shaft. This can be done without removing the backplate. Break off the cable tension arm (24-4) (Figure 1). Hold the tension arm with a screwdriver and turn the escapement shaft (with gas pliers). This may damage the escapement shaft hub, which will be replaced with the new level.

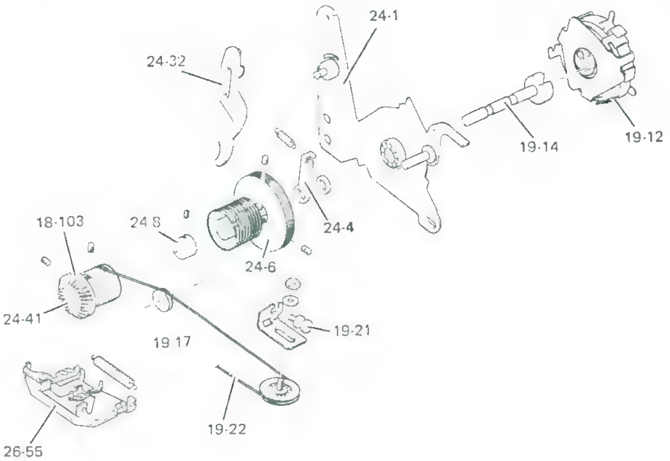


Figure 1

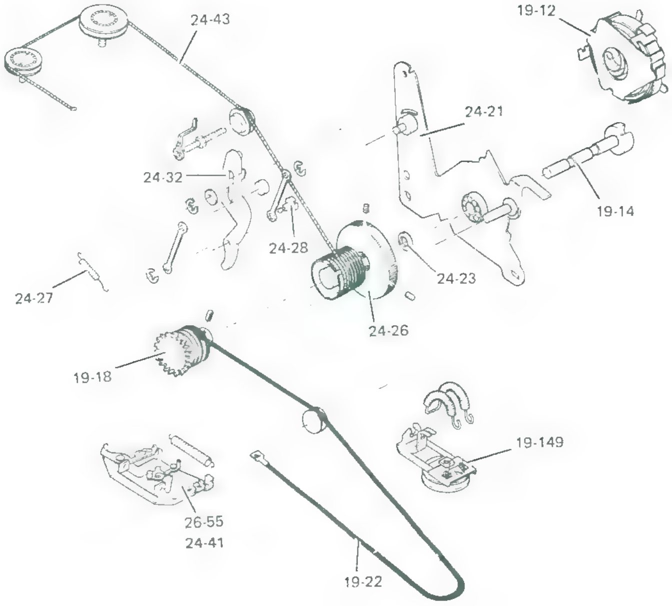


Figure 2

© IBM Corp. 1979

This process breaks out the D slot in the tension arm and will allow removal of the escapement shaft from the rear of the machine after setscrews are loosened in the tab drum (18-103) and collar (24-8).

7. Remove — B/S driver (24-32).
8. Remove — C/R, B/S drum (24-6) through the hole in the bottom of the power frame.
9. Remove — Cord anchor bracket (26-55) (24-41).
10. Remove — Transport pulley bracket (19-21).
11. Remove — Tab cord pulley (19-17).

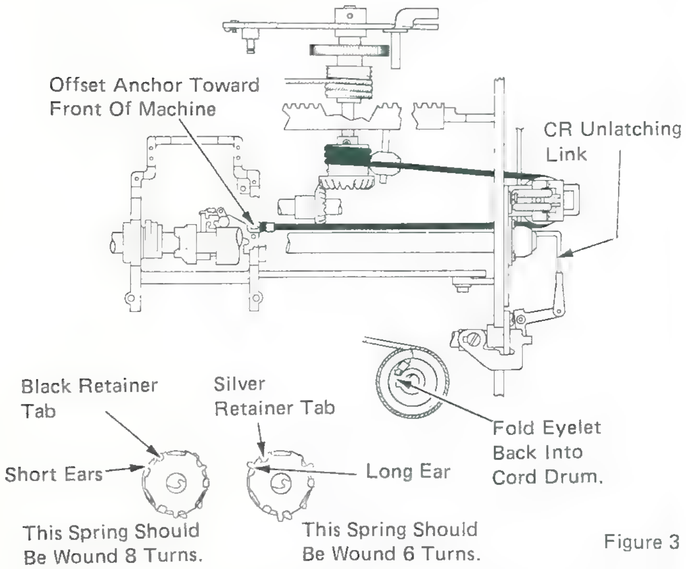
INSTALLATION:

Installation of the dual transport parts can be done by reversing the removal procedure (Figure 2). Use the APM for the adjustment of these components. Also be sure to install the driver mounting stud (24-28) with the head against the backplate. Installation of the C/R steel cable and the tab cord is reviewed below:

Dual Transport System Installation:

Before installing the tab and C/R cord and cable, all other parts should be installed and adjusted properly.

1. Disconnect the carrier return unlatching link.
2. Manually latch the C/R and turn the turning wheel while counting the number of rotations of the escapement shaft, until the mainspring is wound the proper number of turns (Figure 3).



Offset Anchor Toward Front Of Machine
CR Unlatching Link
Black Retainer Tab
Silver Retainer Tab
Short Ears
Long Ear
Fold Eyelet Back Into Cord Drum.
This Spring Should Be Wound 8 Turns.
This Spring Should Be Wound 6 Turns.

Figure 3

3. With the carrier all the way to the left, connect the tab cord to the carrier and position the cord through the right power frame and around the transport pulley, then connect it to the front drum (Figure 3). It is not necessary to wind the cord around the drum. With the cord attached to both ends, unlatch the C/R and guide the cord onto the drum while rotating turning wheel. (This will wind the rest of the cord onto the drum.) Then place the cord on the cord pulley (19-17) (Figure 1).
4. Turn machine on and space or tab the carrier over the operational shaft area for easier installation of the C/R cable. Turn the machine off and be careful not to B/S or C/R, because it will unwind the tab card. Next, loosen the setscrews in the B/S drum. With the machine off, cycle a B/S operation until the driver engages the ratchet. This will help in the installation of the C/R cable.
5. Attach the cable to the anchor bracket. (Use the fork end of a spring hook.) Run the cable around the pulleys and tilt machine up. Hook the cable onto the B/S drum and hold in position while rotating ratchet to wind the excess cable onto the drum. This can be done by releasing the driver from the drum while holding and rotating the drum with the same hand. At the same time hold tension on the cable with a spring hook from the left end of the machine. Do not position the cable around the front pulley (Figure 4) and take up all excess cable and then tighten the B/S drum. Hook the cable over the front pulley and check for proper adjustment of the transport pulley (Frame 117).
6. Connect C/R unlatching link.
7. Perform a functional check.

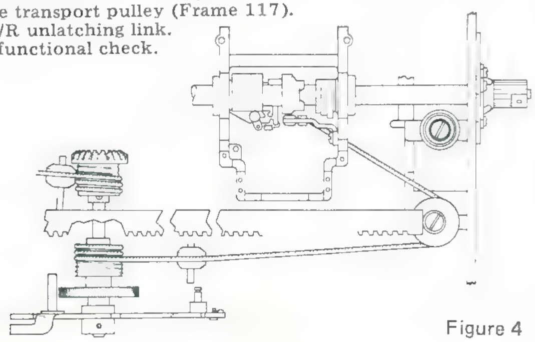


Figure 4

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
19	149	1205784	Trans. Pulley B/M	1	2.20
	14	1164561	Escap. Shaft	1	.75
	17	1124628	Pulley	1	.45
	18	1128108	Tab Drum	1	1.20
	22	1175579	Cord	1	.35
24	3	1205777	Washer	1	†
	6	1205779	B/S Drum	1	4.15
	27	1206990	Spring, Driver	1	.10
	28	1204058	Stud, Driver	1	.09
	32	1206908	Driver	1	1.80
	41	1205783	Bracket Dual Transport Sys Correcting	1	1.85
	115	151720	Setscrews	2	PP14
26	55	1290577	Bracket, Dual Pitch FTB	1	.65

Note: A B/M will be available at a later date.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: 1 Hr.

Use Applicable Service Code

396

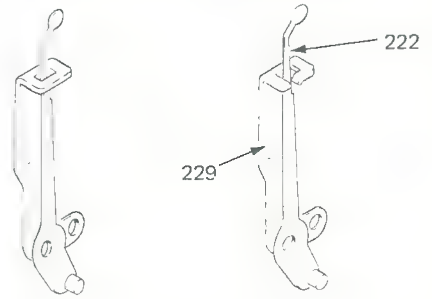
SERVICE INFORMATION

8-1-79

Model(s): 8XX

SUBJECT: Velocity Lever Asm.

For ease of plant assembly, an opening has been added to the upper portion of the velocity lever bracket on "Selectric" II's.



Old Level

New Level

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	222	1206588	Velocity Lever ("Selectric" II)	1	2.25
	229	1141758	Velocity Lever Bracket	1	.45

Parts Information: Old level assemblies will not be available when current stock is depleted. When replacing old level assemblies it is necessary to order both individual parts. B/Ms will be available at a later date. Individual parts for "Selectric" (7XX) will be announced later.

397

SERVICE INFORMATION

8-1-79

Model(s): 8XX

SUBJECT: Part Number/Price List (PN/PL) (F/N 241-5103-7) — Correction

The part number for the fabric ribbon pointer (10-37) is incorrectly listed as 1206975. It should be 1204975.

Mark this change in your PN/PL.

TIP

TIMELY INFORMATION PROGRAM

7-3-79

SUBJECT: Fabric Ribbon Reverse Failure

Fabric ribbon machines sitting unused for a length of time may exhibit "ribbon reverse" failure. The nylon ribbon will have a dimple in the core caused by the spring loaded reverse finger (13-11). This dimple is deep enough to cause the sensing finger to reverse.

SOLUTION: Change the ribbon.

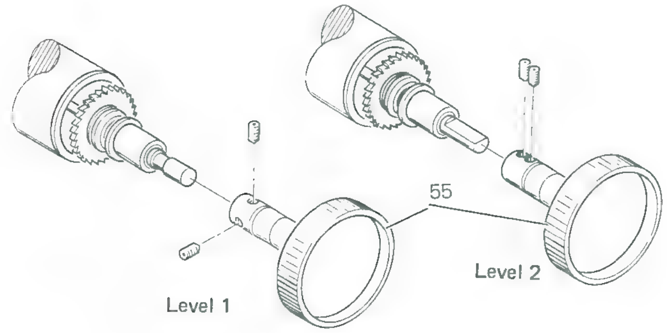


Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
12 55	1205427	Knob (In Line Screws), Level 2	1	1.30
55	1256532	Knob, 90 Degree Screws Level 1	1	*

THE FOLLOWING INFORMATION FOR IBM USE ONLY

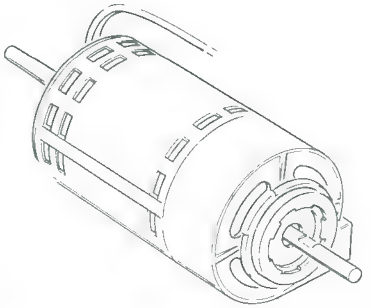
Estimated Installation Time: .1 Hr.

378 SERVICE INFORMATION

1-17-79

Model(s): IBM "Selectric" II

SUBJECT: Motors



Some 115 V 60 Hz motors with a longer shaft on the left hand side have been used in producing "Selectric" II typewriters (Fig. 1). These motors are identical to the standard 115 V 60 Hz double insulated motor except for the longer shaft and a white identification label on the underside of the motor. If replacement is required use the standard motor (11-40).

Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
11 40	1147420	Motor, 115 V 60 Hz	1	62.25

379 RELIABILITY

1-17-79

Model(s): 7XX, 8XX

SUBJECT: Torque Limiter Hubs – Defective

PURPOSE: Some machines have been manufactured with a defective torque limiter hub (25-003), torque limiter screws (25-004) and/or bad end play adjustments.

SYMPTOMS:

1. Dropped loop on C/R pinion spring.
2. Dropped loop on torque limiter spring.
3. Worn C/R pinion "C" clip groove.
4. C/R pinion "C" clip missing.
5. Unresolved slow carrier return (adjustments appear correct).

SOLUTION: Replace torque limiter hub (25-003), and screws (25-004). Examine and replace other operational shaft parts as necessary.

MACHINES AFFECTED: 721 — 0778890, 0797028; 8X3 — 1989988, 5023017; 8X5 — 3867695, 6068040.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .5 Hr.

Use Service Code 32 | This CEM Expires 12-1-79

380 RELIABILITY

1-17-79

Model(s): 8 X 3, 8 X 5

SUBJECT: Keylever Pawl — Defective

SYMPTOM: Broken keylever pawl or intermittent tripping of the interposer due to cracked part.

SOLUTION: Replace keylever (21-105, 106, 107 or 108).

MACHINES AFFECTED: 8 X 3 — 5012751-5033724; 8 X 5 — 6036881-6104433.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32 | This CEM Expires 11-22-79

381 SERVICE INFORMATION

1-31-79
(Revised) 10-10-79

Model(s): All "Selectric" Typewriters Equipped With Spring Bias Tilt Rings

SUBJECT: Rotate Selection Adjusting Tool (P/N 9900633)

PURPOSE:

1. Faster adjustment procedure.
2. More accurate adjustments.
3. To determine if machine is within specification without element.

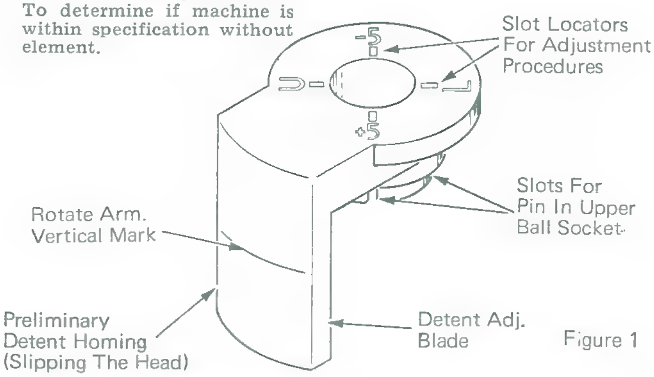
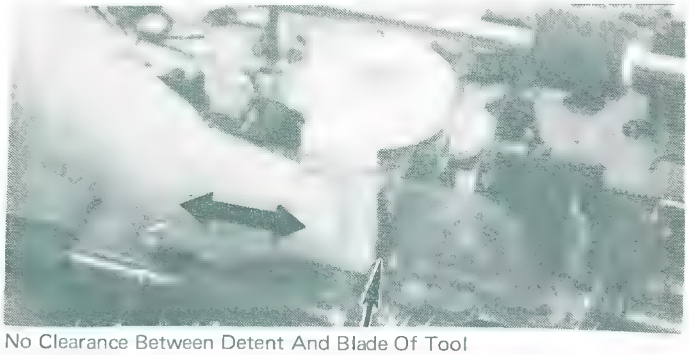

-5
+5
Slot Locators For Adjustment Procedures
Slots For Pin In Upper Ball Socket
Rotate Arm. Vertical Mark
Preliminary Detent Homing (Slipping The Head)
Detent Adj. Blade

Figure 1

HOW TO USE TOOL PROPERLY

Proper adjustment is obtained with the rotate adjusting tool when the following two conditions are met:

1. **No clearance exists between the blade of the rotate tool and the rotate detent** (Fig. 2).



No Clearance Between Detent And Blade Of Tool
CORRECT Method To Check Adjustment

Figure 2

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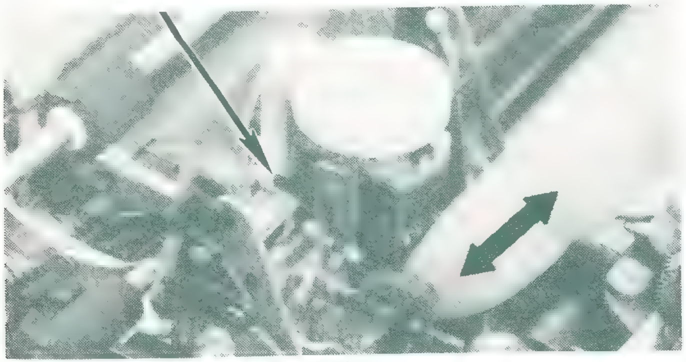
2. **Detent should restore with no binds against the blade of the tool** (Figure 3).

Note: Do not bias the tool in any direction when checking condition No. 2.

Detent Restores With No Binds



Note: Check Detent Guide For Binds

Figure 3

Since the entry of the rotate detent is controlled by correct seating of the tilt detent, it is necessary that the tilt detenting be set up first.

7XX "Selectrics" equipped with the wear compensator cannot be adjusted with the rotate selection adjusting tool unless the compensator arm is disabled using the procedure found on page 59 in the "Selectric" Service Manual, F/N 241-5615.

CAUTION: It is possible for the blade of the tool to bind against the backup shoe on the tilt ring. Therefore, it will be necessary to remove the tool before half cycling the machine for the next adjustment.

ADJUSTMENT PROCEDURE

ROTATE ARM VERTICAL

This is a preliminary adjustment and is made by adjusting the turnbuckle on the rotate link. Adjust the link so that the center of the top of the rotate arm is in line with the scribe line on the blade of the rotate tool (Fig. 4). Tilt the machine in the service position and observe from the bottom of the machine.

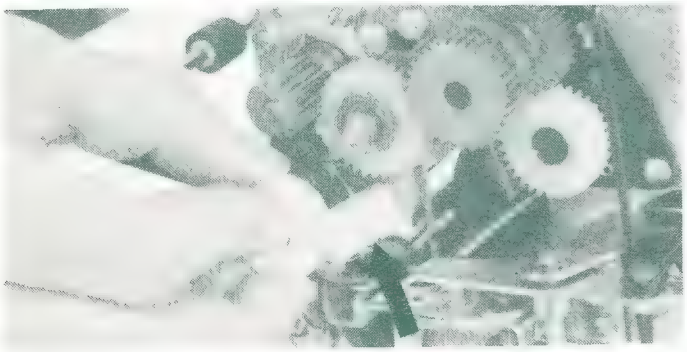
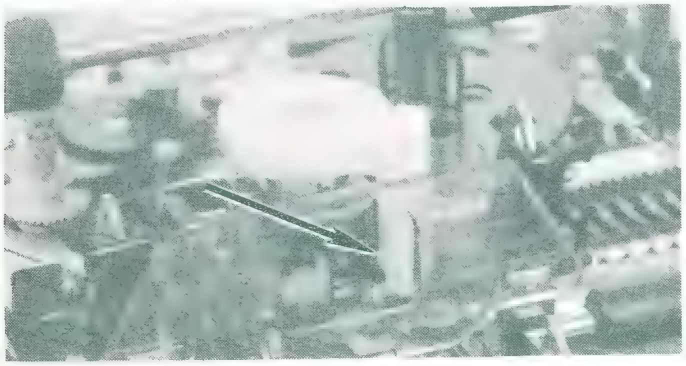


Figure 4

PRELIMINARY HOMING

Half cycle an UPPER CASE "I" with the carrier positioned over the cycle shaft area to aid in loosening the rotate pulley screw. Install the rotate tool with the pin on the upper ball socket located in the "U" (uppercase) slot in the rotate tool (Fig. 5). Loosen the setscrew in the rotate pulley and then turn the tool in a clockwise direction until it touches the rotate detent and hold it in this position while tightening the setscrew.

Note: This is the only time the tool will be used on this side of the rotate detent (Fig. 5).



Hold Blade Of Tool Against Detent – Do Not Check For Clearance Between Blade And Detent For This Adjustment Only

Figure 5

1. **Zero Rotate** — With the machine in UPPER CASE half cycle a "1/4" (zero rotate, tilt 2). Install the tool with the pin on the upper ball socket in the U slot of the rotate tool. Adjust the turnbuckle so that no clearance exists between the blade of the rotate tool and the rotate detent (Fig. 6). Detent must restore with no binds.

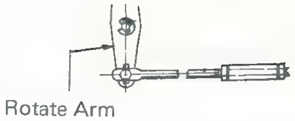


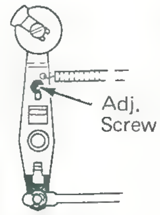
Figure 6

Note: Leave the turnbuckle loose at this time.

Remove tool.

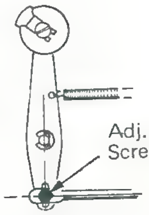
2. **+5 Motion** — Half cycle an UPPER CASE "W" (+5 rotate, tilt 2) and install the rotate tool with the pin on the upper ball socket in the +5 slot of the rotate tool.

Adjust the link up or down on the rotate arm to remove all clearance between the blade of the rotate tool and the rotate detent without binding the detent (Fig. 7, Fig. 8).



Two Piece Rotate Arm

Figure 7



Solid Rotate Arm

Figure 8

Remove tool.

3. a. **–5 Motion** — Half cycle an UPPER CASE "M" (–5 rotate, tilt 2) and install the rotate tool with the pin on the upper ball socket in the –5 slot of the tool. Readjust the turnbuckle to remove all clearance between the blade of the rotate tool and the rotate detent. The detent must restore with **no binds.** Tighten the turnbuckle (Fig. 9).

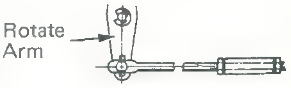


Figure 9

Remove tool.

b. Next half cycle an UPPER CASE "1/4" (zero rotate, tilt 2) and install the rotate tool with the pin on the upper ball socket in the U slot of the rotate tool. Adjust the –5 stop screw for no clearance and no binds between the blade of the tool and rotate detent (Figure 10A).

Note: This adjustment is used for both the two-piece and solid balance arm. It may be necessary to preset the two-piece balance arm by aligning the notches as shown in Figure 10B.

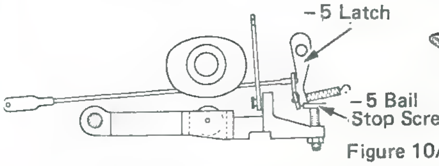


Figure 10A

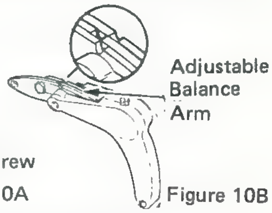


Figure 10B

Adjusting the –5 stop screw up decreases the clearance between the blade of the tool and the detent.

Remove tool.

4. **Shift Motion** — With the machine in LOWER CASE half cycle a "1/2" (zero rotate, tilt 2). Install the rotate tool with the pin on the upper ball socket in the L slot in the rotate tool. Adjust the shift stop screw in or out for no clearance and no binds between the blade of the tool and rotate detent (Fig. 11).

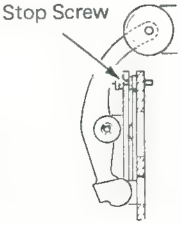


Figure 11

Remove tool.

DIAGNOSTIC TIPS

1. All rotate latches should restore at approximately the same time the check pawl latches in the cycle clutch.

2. With the machine in the rest position, the –5 stop screw can be preset by turning it in until it bottoms and then by backing it out 1/2 turn. Ensure the cycle clutch latch pawl is in the window of the cycle clutch.

3. Check following areas:

   a. Skirt clearance
   b. Detent timing
   c. Rotate detent guide binding
   d. Rotate spring tension
   e. Excessive head play (worn dog bone): This can be checked after making the adjustment in step 1 of the adjustment procedure. Remove tool and install a good element. Half cycle a "1/4" and withdraw the rotate detent and turn the element counterclockwise. Release the detent; it should not enter the next tooth. If the detent does enter the next tooth, the head play is excessive and the dog bone and the upper and lower ball socket should be replaced.
   f. Binding rotate arm stud (unable to raise stud high enough in slot in rotate arm)

398 SERVICE INFORMATION 9-26-79

Model(s): "Selectric" II With Rotary Backspace (R/BS)

SUBJECT: Carrier Replacement — Service Tip

Carrier replacement time can be reduced on R/BS "Selectric" IIs by leaving the transport cords and velocity cable attached to the original velocity bracket. If the velocity bracket (24-41 or 26-55) does not require replacement, it may be removed from the old carrier and installed on the new one without disconnecting transport cords or velocity cable.

1. Remove two screws (24-49 or 26-115) securing velocity bracket (24-41 or 26-55) to carrier, leaving cords and velocity cable attached.
2. Remove the carrier.
3. Remove velocity bracket from new carrier.
4. Install carrier.
5. Reattach original velocity bracket. **Ensure** that the DI follower yoke (02-210) is properly positioned over the print cam follower roller (02-205).

Note: Yoke mounting stud (02-220) is free to move left-right. Use of scissors clamps or other means is advisable to prevent stud movement during carrier change and reinstallation.

399 RELIABILITY 9-26-79

Model(s): 8XX

SUBJECT: Left-Hand Ribbon Lift Guide — Level 1

Until the ribbon lift assembly (P/N 1256565) is available (approximately January, 1980), use one of the following methods to repair a machine with a broken L-1 lift guide.

If the metal support bracket is broken (Figure 1), it will be necessary to replace the escapement bracket (06-72, 07-101) and install a Level 2 lift guide (15-2).

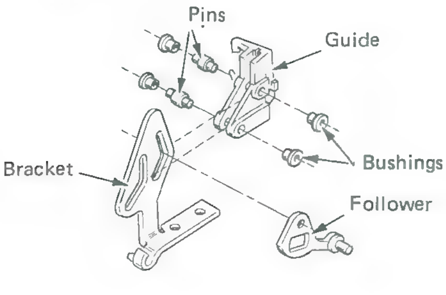
Note: Use Code 32 if replacement of the escapement bracket is necessary.

If only the plastic guide is broken, it can be replaced as follows using guide, P/N 1206534. (Use applicable service code.)

1. Spread old guide carefully with a screwdriver until retainer pins snap out.
2. Remove pins, guide, and bushings. (Retain pins for reinstallation.)
3. Install new guide as illustrated in Figure 1. Pins can be pressed together using gas pliers.

Note: Part numbers for pins and bushings will not be available. They can be obtained by removing them from another lift guide (Level 2) in an emergency.

Due to possible damage to the plastic guide during removal from the bracket, removal of the guide from a Level 2 asm. to repair a Level 1 asm. is not recommended.



MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
	1206534	Plastic Lift Guide (Only)	1	*

MACHINES AFFECTED: All 8XX machines with Level 1 ribbon lift guide.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Only a small quantity of parts will be stocked. Order on "as needed" basis only.

Use Service Code 32 (Broken Metal Bracket Only)

Use Applicable Service Code (Broken Plastic Guide Only)

This CEM Expires 1-30-80

400 SERVICE INFORMATION 9-26-79

Model(s): Correcting "Selectric"

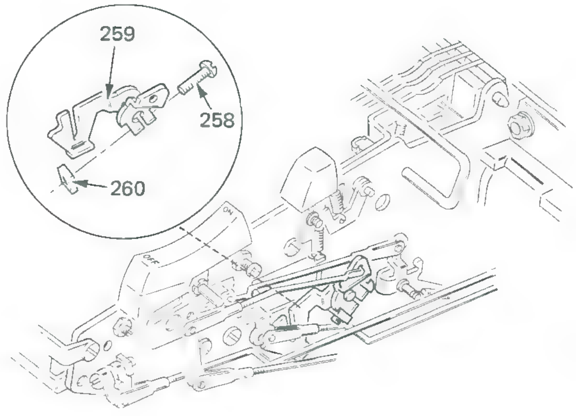
SUBJECT: Correcting Keybutton Interlock — Field Installable

PURPOSE: The interlock bracket (26-259) is now available for field installation to prevent the correcting mechanism from being operated when the machine is in the "OFF" position.

SYMPTOM: After turning the machine "ON," the first character does not print because the correcting mechanism was operated while the machine was "OFF."

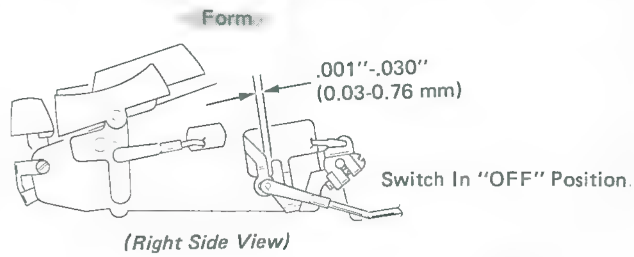
SOLUTION: Remove the keyboard lockout bail bellcrank (21-553) and install the correcting keybutton interlock. The same clamping screw may be used.

Note: When installing the interlock on machines with shift sensing, you must update to the new level shift sensing bracket (41-17) (P/N 1164400).



Correcting Keybutton Interlock [Front-To-Rear (26-259)] — Form the correcting keybutton interlock front-to-rear to get .001"-.030" (0.03-0.76 mm) between the horizontal portion of the correcting keylever and the interlock.

307.3 Correcting Keybutton Interlock (Front-To-Rear) (26-259)



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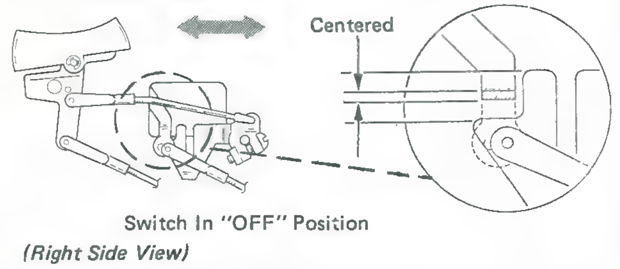
Lockout Bail Link (21-546) — With the switch in the "OFF" position, adjust the lockout bail link so the horizontal portion of the correcting keylever is centered on the locking surface of the correcting keybutton interlock.

307.4 Lockout Bail Link (21-546)

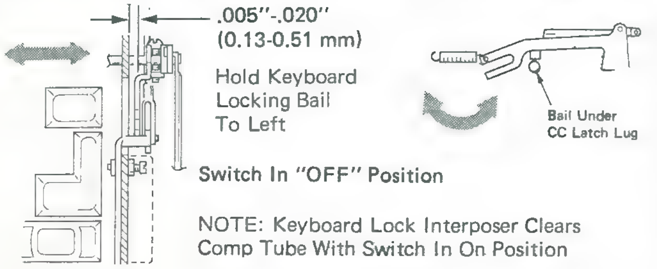


Correcting Keybutton Interlock And Lockout Bail (26-259) — With the machine in the "OFF" position, adjust the correcting keybutton interlock for the following conditions:

1. Position the correcting keybutton interlock left-to-right to get .005"-.020" (0.13-0.51 mm) between the keyboard side frame and the lockout arm.
2. Position the lockout bail under the cycle clutch latch lug.

Note: The keyboard lock interposer must clear the compensator tube with machine in the "ON" position.

307.5 Correcting Keybutton Interlock And Lockout Bail (26-259)


.005"-.020"
(0.13-0.51 mm)
Hold Keyboard Locking Bail To Left
Bail Under CC Latch Lug
Switch In "OFF" Position
NOTE: Keyboard Lock Interposer Clears Comp Tube With Switch In On Position

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
26	259	1287348	Corr. Keybutton Interlock	1	*

THE FOLLOWING INFORMATION FOR IBM USE ONLY

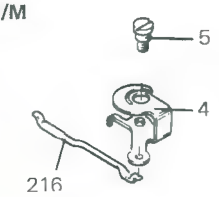
Use Applicable Service Code

401 SERVICE INFORMATION 10-10-79

Model(s): "Selectric" II Correcting

SUBJECT: Correcting Tape Feed B/M

PURPOSE: For ease of replacement and ordering, a B/M has been released containing 26-4, 5 and 216 (Figure 1).



MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
26	13	1279490	Corr. Tape Feed B/M	1	.40

402 SERVICE INFORMATION 10-10-79

Model(s): "Selectric" Typewriters

SUBJECT: Selective Ribbon Mechanism — Feed Failures/Ribbon Wrapping Around Spiked Driver

When experiencing ribbon feed failures and/or ribbon wrapping around the spiked driver after approximately 1/2 of the ribbon is used, the cause may be the spiked driver is not parallel with the take-up post [APM (F/N 241-5939), frame 289] (Figure 1). [This can often be detected visually. Observe the take-up spool for evidence of "coning" (ribbon tends to wind toward the top of the take-up spool).] Also check the spike mark pattern on the used ribbon. The upper and lower spike marks should be of equal size and penetration on a properly adjusted mechanism.

289 Spiked Driver Post (15-61)

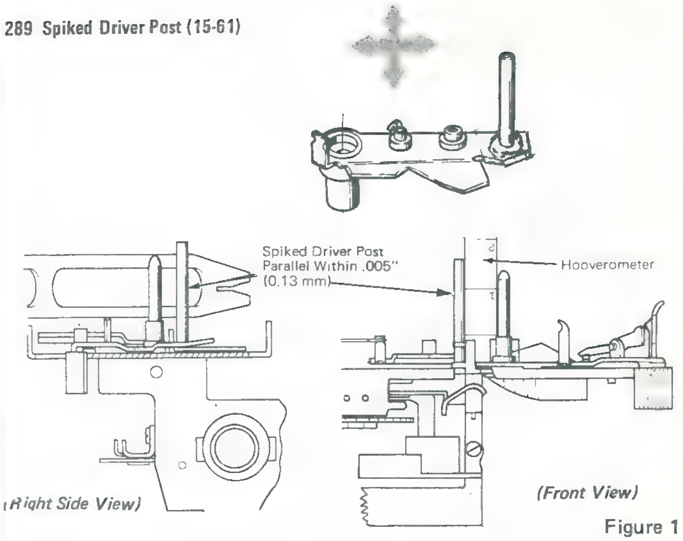


Figure 1

When making the spiked driver post adjustment, it is important that both left-right and front-rear parallel conditions are correct.

Note: It is recommended that this adjustment be checked when installing a new ribbon plate. Ribbon folding or improper centering in the lift guides can also contribute to the above failures. See "Selectric" CSI items 15-1 and 46-5 for additional information.

403 SERVICE INFORMATION 10-10-79

Model(s): 7XX, 8XX

SUBJECT: Adjustment Parts Manual (APM) (F/N 241-5939-1) — Correction

The clearance in frame 215 is incorrectly listed as .30." It should be .030."

Mark this change in your Adjustment Parts Manual (Figure 1).

215 Platen Height (22-291)

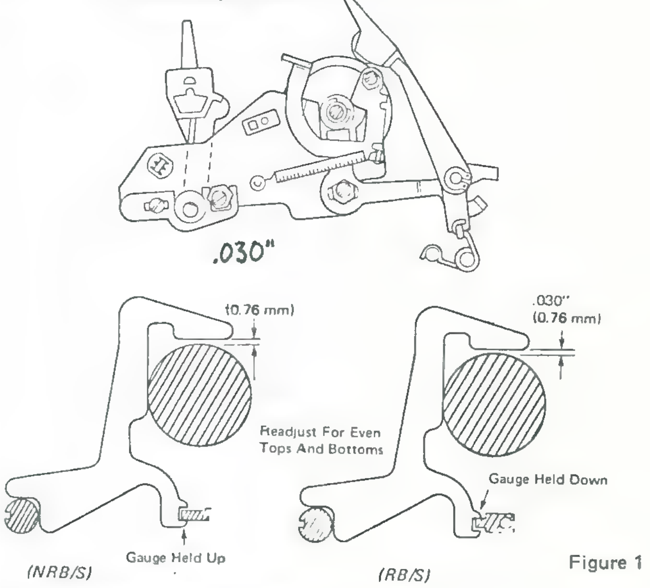


Figure 1

404 SERVICE INFORMATION

Model(s): "Selectric" Typewriters

SUBJECT: PN/PL Correction

Mech. code 22 Ref. 53 for the shaft 8X5 15.3" should be part number 1204352.

Example:

22	53	1204352	Shaft 8X5, 15.3"	1	1.70

Mark this change in your PN/PL (F/N 241-5103).

405 RELIABILITY

11-7-79

Model(s): 7XX, 8XX

SUBJECT: Motor Pulley And Pawls — Defective

SYMPTOM: Machine locks up or will not start due to failure of motor pawls to disengage from the motor pulley.

SOLUTION: Check for a minimum clearance of .005" (0.13 mm) between the motor pawls and the steps of the pulley. If this clearance does not exist, replace the motor pawls (11-43) and motor pulley (11-48).

Note: This applies to the one-piece pawl assembly only.

MACHINES AFFECTED: Between approx. S/N: 7X1 — 0797028-0853313, 8X3 — 5023017-5126951, 8X5 — 6068040-6388812.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32

This CEM Expires 9-1-80

406 SERVICE INFORMATION

11-7-79

Model(s): All "Selectric" Typewriters

SUBJECT: Tilt Tapes — Labels Incorrect

Some gear tilt tapes have the wrong machine size listed on the label (Figure 1). The part numbers and tapes are correct. Disregard tape size description or make appropriate change (Figure 2).

Incorrect Label

CORRECT P/N
1287881
TILT TAPE
7X3

1287880
Tilt Tape
7X5

Figure 1

Correct Label

CORRECT P/N
1287881
TILT TAPE
7X5

1287880
Tilt Tape
7X3

Figure 2

407 SAFETY

11-7-79

Model(s): All "Selectric" Typewriters

SUBJECT: Heat Buildup

SAFETY LOCATION: The motor vent grill.

SAFETY PRECAUTION: If the vent is blocked and the machine is left on, the parts can become hot enough to cause possible injury.

SAFETY CORRECTIVE ACTION: If the vent is blocked, remove the blockage. Advise the customer to maintain proper clearance to ensure air flow.

408 SERVICE INFORMATION

12-19-79

Model(s): 8XX

SUBJECT: Margin Rack — Single Pitch (Rotary B/S)

Two spacers (10-46, 24), a collar (10-44) and a setscrew (10-45) have been eliminated from the single pitch margin rack. This has been done by using a shorter spring (10-23) and installing the collar (10-30) from the opposite direction.

It is no longer necessary to use these parts (10-24, 45, 46). If replacement of these obsoleted parts is necessary, the new shorter spring (10-23) should be used and the parts assembled as in Figure 1 (Level 2).

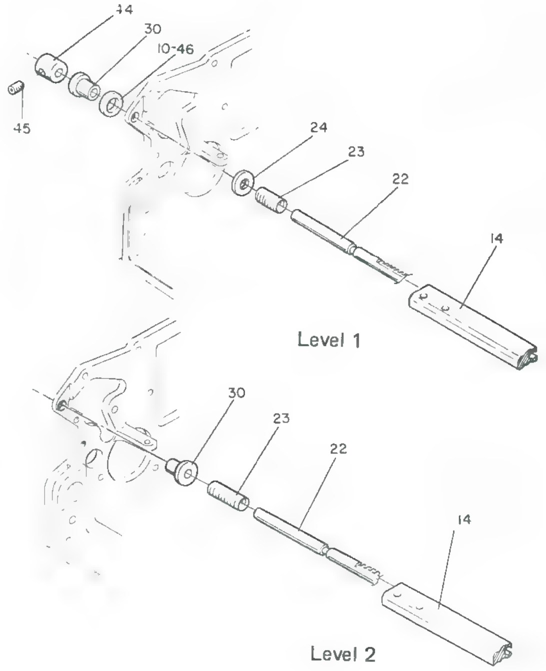


Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
10 23	1256549	Spring	1	†

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .5 Hr.

TIMELY INFORMATION PROGRAM

12-19-79

Model(s): 7XX, 8XX

SUBJECT: Motor Binds

Motor failures occurring because of binds in the motor shaft can be caused by misaligned bearings. The bearings are a self-aligning type and tapping lightly on the motor end bells and shell may correct the problem (Figure 1).

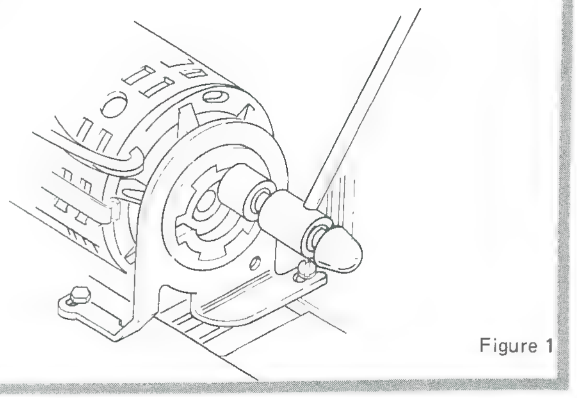


Figure 1

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TIMELY INFORMATION PROGRAM 12-19-79

Model(s): "Selectric II"

SUBJECT: Top Cover Pin

If a top cover pin is needed on a "Selectric" II cover, the "Selectric" I pin (04-85) can be used. This pin is shorter but will work on "Selectric" II if needed.

TIMELY INFORMATION PROGRAM 12-19-79

Model(s): 8X3

SUBJECT: Platen Substitution On 8X3 Machines

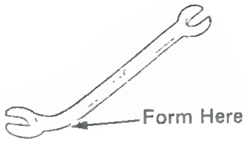
Print and index problems can be caused by a 7X3 platen (12-16) being installed in an 8X3 machine.

The 7X3 right-hand platen shaft is too short to support the overall length of an 8X3 bushing, causing movement of the platen inside the bushing.

Do not substitute 7X3 platens on 8X3 machines.

TIMELY INFORMATION PROGRAM 11-7-79

To make tilt home adjustment and/or skirt clearance adjustment easier, form tool No. 9900208 one inch from the 7/32" end as shown.



CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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As of January 1976, the current "Selectric" Typewriter CEMs begin on page 47 (reissued 1-28-76). A complete set of CEM materials consists of the Safety & Service Information Book (F/N 241-5516-4, dated June 1975) and CEM pages 47 and above.

CEM'S 189-205 Can Be Located By Using "Selectric" Contents Page.

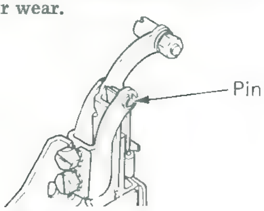
206 RELIABILITY

Models 7XX, 8XX

6-13-73
(Revised) 11-14-73

CYCLE CLUTCH PINS – WEAR

Some "Selectric" Typewriters were shipped to the field with soft cycle clutch latch pins (21-528). If experiencing cycle clutch unlatching problems check this pin for wear.



REF	PART NO.	DESCRIPTION	PRICE
28	1175545	Pin	.05

MACHINES AFFECTED:

7X1 — 9520177 — 9530670
7X3 — 9707897 — 9725250
7X5 — 9626310 — 9644550
8X3 — 1115521 — 1148260
8X5 — 2144247 — 2187110

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

This CEM Expired 8-1-74

CEMs 207-222 Can Be Located By Using "Selectric" Contents Page.

223 SERVICE INFORMATION

Models 7XX, 8XX

10-17-73
(Revised) 2-22-78

HEAD PLAY – EXCESSIVE

If experiencing excessive head play, the cause may be attributed to contaminated ball joints (02-414) (dog bone), or out of specification parts.

Replace the dog bone, lower ball socket, tilt ring and tilt ring pins (bullets).

Note: The IPE Model 224 backspace tool (P/N 9900369) can also be used to adjust the tilt detent setscrews by holding the nut with the backspace tool and inserting a No. 2, 6 fluted wrench through the B/S wrench into the setscrew.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	414	1124220	Ball Joint	1	1.85

THE FOLLOWING INFORMATION FOR IBM USE ONLY

This CEM Expired 5-1-76

CEM 224 Can Be Located By Using "Selectric" Contents Page.

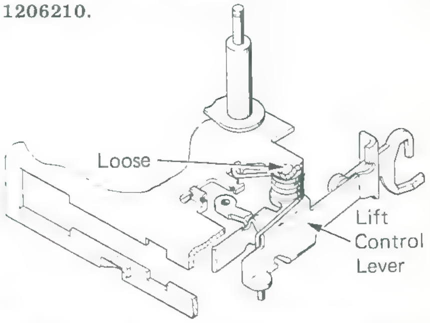
225 SERVICE INFORMATION

Models 7XX, 8XX

10-17-73

LIFT CONTROL LEVER MOUNTING POST – LOOSE

If experiencing intermittent ribbon lift failures with the selective ribbon system, check the mounting post of the lift control lever (15-76). If loose, replace ribbon plate assembly (15-151) P/N 1206661 or (26-106) P/N 1206210.



THE FOLLOWING INFORMATION FOR IBM USE ONLY.

Use Applicable Service Code

CEMs 226-234 Can Be Located By Using "Selectric" Contents Page.

235 SERVICE INFORMATION

Models 7XX, 8XX

1-16-74

SUBJECT: Shift Detent Spring – Plastic Cam

PURPOSE: Redesigned detent spring (16-216) used on 7X1 is now on all production level "Selectric" typewriters.

Note: Detent spring (16-216) can be used on early level plastic cam machines to give more reliable shift detenting. Clamp (16-218) must also be installed.

Caution: This is not a fix for improper shift adjustments or worn parts.

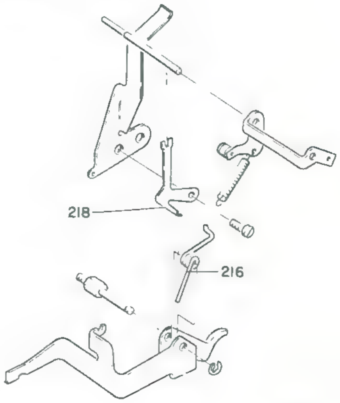


Figure 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
16	216	1174187	Spring	.05
	218	1205820	Bracket	.20

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .2 hours.

Use Applicable Serv. Code

236 SERVICE INFORMATION

Models 7XX, 8XX

1-16-74

SUBJECT: Type Element – Labanotation

PURPOSE: Labanotation is a graphic system of recording human body movement. The Labanotation element is designed for use in areas that study expressive and behavioral aspects of body movement, e.g., choreography, physical therapy, etc.

This typestyle is a very fine line design and **must** have a manual velocity control B/M (21-554) installed. The type is designed to be used with 10 pitch only, and requires a 45 ratchet B/M.

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PARTS REQUIRED:

MECH/REF.		PART NO.	DESCRIPTION	PRICE
02	180	1167206	Element — Labanotation	$18.00

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

CEMs 237-242 Can Be Located By Using "Selectric" Contents Page.

243 SERVICE INFORMATION

3-13-74

Models XX3, XX5

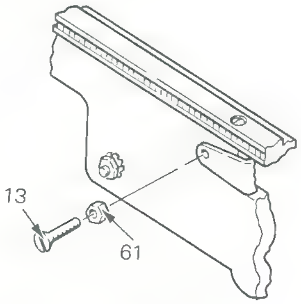
SUBJECT: Escapement Torque Bar Backup Stud — Left Side

PURPOSE: Stabilize torque bar flexing.

SYMPTOM: Escapement failures on the left side of the machine.

SOLUTION: If escapement failures on the left side of machine cannot be corrected by normal adjusting, install left side backup stud (07-13) and nut (06-61).

ADJUSTMENTS: With center torque bar backup stud adjusted correctly (CEM 199), adjust left side backup stud to just touch torque bar at rest. If necessary, readjust stud to obtain .008"-.010" pawl tail clearance on the left side.



Rear View

PARTS REQUIRED:

MECH/REF.		PART NO.	DESCRIPTION	PRICE
07	13	1206494	Screw, Torque Bar Backup	.20
06	61	37913	Nut, Dual Pitch	PP07
	61	1205770	Nut, Single Pitch	.10

MACHINES AFFECTED: Plant installed above approx. S/N 7X3 9776269, 7X5 9698365, 8X3 1253404, 8X5 2341364.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

CEM 244 Can Be Located By Using "Selectric" Contents Page.

245 SERVICE INFORMATION

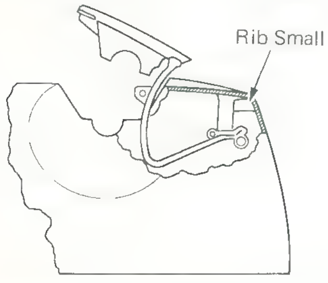
3-13-74

Models 8XX

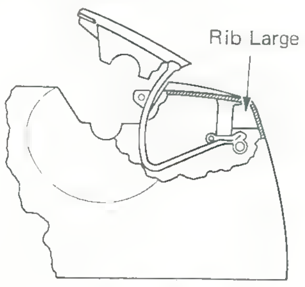
(Revised) 4-24-74

SUBJECT: Cover Hinge And Bracket — Redesigned

PURPOSE: Replace both the cover hinge (05-006/049) and bracket (05-004) when either needs replacing on old level machines.



Old Level



New Level

PARTS REQUIRED:

MECH/REF.		PART NO.	DESCRIPTION	PRICE
05	4	1166191	Bracket	.15
	6	1451810	Hinge, RH	.65
	49	1451811	Hinge, LH	.65
	127	1172184	Washer — Use With Old Level Cover	.15

MACHINES AFFECTED: All "Selectric" II's

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CEMs 246-253 Can Be Located By Using "Selectric" Contents Page.

254 SERVICE INFORMATION

5-8-74

Models 7XX, 8XX

(Revised) 1-15-75

SUBJECT: Margin Set Lever — Redesigned

PURPOSE: The margin set lever has been redesigned to increase the clearance between the margin set lever and the center cover trim. The mounting holes for the pointer bracket have been elongated to prevent the pointer from hitting the margin set lever.

On machines prior to the change it will be necessary to change the margin set levers in pairs.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
09	15	1206498	Lever, Charcoal Gray	.25
	15	1206497	Lever, Navy	.25
	15	1206496	Lever, Blue	.25
	15	1206495	Lever, Accent Gray	.25

Note: P/N's for assemblies that include the lever remain the same.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

PARTS INFORMATION: Reorder P/N's 1272734, 1272735, 1272736 and 1274860 and then scrap existing stock.

CEMs 255-256 Can Be Located By Using "Selectric" Contents Page.

257 SERVICE INFORMATION

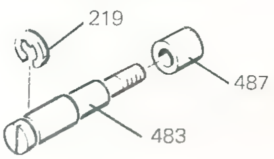
6-5-74

Models 7XX, 8XX

SUBJECT: Rotate Bellcrank Mounting Stud — Redesigned

PURPOSE: Mounting stud (23-483) has been redesigned to prevent breakage and facilitate replacement of the stud or rotate bellcrank.

This change uses a spacer (23-487) instead of the hex-headed nut used previously.



PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
23	219	332747	Retainer	.04
	483	1123735	Stud, Rotate Bellcrank Mounting	.20
	487	1206794	Spacer	.20

MACHINES AFFECTED: Plant installed above approx. S/N 7X1-0214900; 7X3-0413310; 7X5-0311514; 8X3-1305080; 8X5-2419340.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

PARTS INFORMATION: Scrap existing stock of P/N 1123735 and reorder using same part number.

CEM 258 Can Be Located By Using "Selectric" Contents Page.

259 SERVICE INFORMATION

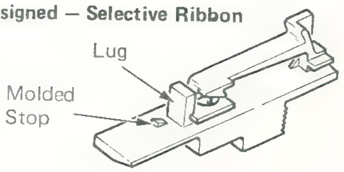
6-5-74

Models 8XX

(Revised) 2-22-78

SUBJECT: Stencil Lever — Redesigned — Selective Ribbon

PURPOSE: Stencil lever (15-80) has been redesigned with a molded stop to prevent the lever from popping out of the ribbon plate when pushed too far left.



Continued

(CEM 259 Continued)

To install redesigned stencil lever:
1. Remove C-clip (15-21) from lift cam follower (15-24).
2. Move stencil lever (15-80) to left and disengage from ribbon plate (15-86).
3. Remove spring (15-79) from old stencil lever and install on new stencil lever. Do not overstretch spring.
4. Insert screwdriver through opening in ribbon plate (15-86) and move lift control lever (15-76) to left to reinstall stencil leverl.
5. Ensure lift control lever is engaged with lift cam follower roller (15-20) and reinstall clip (15-21).

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
15	80	1206598	Stencil Lever	.50

MACHINES AFFECTED: Plant installed above approx. 8X3 — 1423000, 8X5 — 2631000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .2 hrs.

Use Applicable Service Code

PARTS INFORMATION: Reorder P/N 1206598 and scrap existing stock when received.

260 RELIABILITY

6-5-74

Models 7XX, 8XX

(Revised) 2-22-78

ESCAPEMENT – SINGLE PITCH – SKIPPING

Some "Selectric" Typewriters may have reached the field with contaminated escapement racks.

When experiencing random tab or escapement failures check the escapement pawl tip (06-024) for wear. If wear is found, the escapement pawl and escapement rack (06-027) must be replaced.

Rapid wear of the new pawl will occur if used with a contaminated escapement rack.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
06	024	1128201	Pawl, Escapement	1	1.00

MACHINES AFFECTED: Between approx. 7X1, 9575802-0210401; 7X3, 9761578-0410375; 7X5, 9682961-0309040; 8X3, 1230580-1297363; 8X5, 2304582-2409545.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

Use Applicable Service Code

This CEM Expired 6-5-75

261 SERVICE INFORMATION

7-17-74

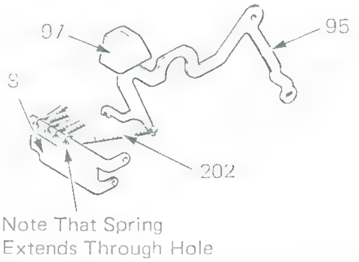
Models 8XX

(Revised) 9-11-74

SUBJECT. Correcting Keylever And Button – Redesigned

PURPOSE. Correcting keylever (26-95) and button (26-97) have been redesigned to prevent unintentional activation of the correcting mechanism.

SOLUTION: The button has been lowered in height and a spring added to the keylever increases the force required to initiate a correcting cycle. Spring (26-202) anchors to a hole added to front keylever guard (08-8). Install spring so that it will not interfere with the keybutton when depressed.



Note: Spring (26-202) may be shortened to increase the pressure if un-intentional actuation persists.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
08	8	1141226	Guard, Keylever	.75
26	95	1206802	Keylever	.35
	97	1206160	Button, Accent Gray	.35
	97	1206161	Button, Charcoal Gray	.35
	97	1206224	Button, Navy Blue	.35
	202	1206712	Spring	.05

MACHINES AFFECTED. Plant installed above approx. 8X3-1315900, 8X5-2446400.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

This CEM Expired 7-1-75

PARTS INFORMATION: Scrap existing stock of P/Ns 1141226, 1206174, 1206160, 1206161, 1206224. Reorder stock using same part number, except for 1206174 order 1206802.

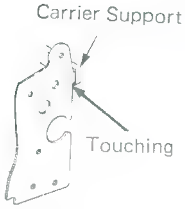
CEMs 262-265 Can Be Located By Using "Selectric" Contents Page.

266 SERVICE INFORMATION

8-14-74

Models XX3, XX5

KEYBOARD OUT OF POSITION



When experiencing multiple functional and typing failures on newly installed machines, check to see if keyboard is properly positioned. It is possible that the keyboard will be tight, but not properly positioned. On XX3 and XX5 it should be touching the carrier support. If necessary, reposition keyboard before making any adjustments in these models.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

Use Applicable Service Code

CEM 267 Can Be Located By Using "Selectric" Contents Page.

268 SERVICE INFORMATION

9-11-74

Models 7XX, 8XX

(Revised) 7-16-75

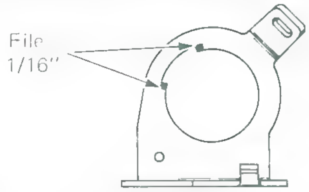
IDLE NOISE

Idle noise on "Selectric" typewriters can be minimized by making the following checks and adjustments.

A. BINDS
1. Cycle clutch end play/overthrow.
2. Operational shaft end play.
3. Shift clutch spring clearance.

B. MOTOR
1. Drive belt tension/tracking.
2. Motor should be parallel to frame.
3. Inspect condition of mylar insert.
4. Ensure weight on clutch pawl is not hitting drive belt.
5. Inspect condition of rubber motor mounts.
6. Ensure mounting brackets are not pressing in on motor.
7. Remove the metal shipping rings located between motor and rubber mounts.

   Note: One method to remove the rings is to first break them and then twist into a roll with a "T" bender or duckbill pliers. Be sure to check the rubber mounts for proper installation after removing the rings.
8. The motor mounting bracket slots can be filed approximately 1/16" on each end to relieve crimping of rubber mounts.



C. COVERS
1. Ensure machine does not contact any part of the covers—copy lever, switch pitch lever, etc.
2. Machine should be level in the covers and not hitting on the bottom cover.

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3. The copy control lever shaft should not be touching the A-frame assembly.
4. The service feet should not extend through the bottom cover.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

269 SERVICE INFORMATION

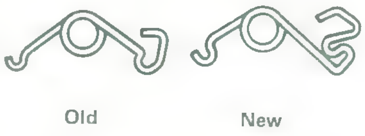
9-11-74

Models 7XX, 8XX

(Revised) 2-22-78

SUBJECT: Load Lever Spring—Redesigned

PURPOSE: Under certain conditions, it is possible for the load lever spring to pop off. New level will eliminate this condition.



SOLUTION: Replace with new level spring (26-18).

Note: This change cannot be installed on machines manufactured prior to 8X3 1028900, 8X5 — 203400 unless the old level ribbon plate asm. is replaced with the new level (26-106).

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
26	18	1206018	Spring	.40
	106	1206210	Ribbon Plate Asm.	28.75

MACHINES AFFECTED: Plant installed above approx. 8X3-1345000, 8X5-249400.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

Use Applicable Service Code

This CEM Expired 9-15-75

PARTS INFORMATION: Reorder P/N 1206018 and scrap existing stock when new level received.

270 SERVICE INFORMATION

10-9-74

Models 7X1

FILTER SHAFT–WORLD TRADE CORP.

Temporarily, World Trade filter shafts are being used in production of the 7X1 "Selectric" Typewriter. This shaft is distinguishable from the current domestic shaft in that the vanes contacting the interposer tails are welded to the shaft.

If replacement is necessary, the domestic filter shaft (21-114) should be used. At this time, discard the thinner of the two thrust washers. All keyboard adjustments remain the same.

MACHINES AFFECTED: Plant installed above approx. S/N 7X1 0226311

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

Use Applicable Service Code

CEM 271 Can Be Located By Using "Selectric" Contents Page.

272 SERVICE INFORMATION

10-23-74

Models 8XX

(Revised) 1-28-76

SUBJECT: Half Backspace — Redesigned — Level 3

PURPOSE: To relieve a "bias" torque on the escapement rack.

SOLUTION: A torsion spring (07-48) now replaces the compression spring (07-103). The cam and lever angles (07-107 & 106) have also been changed to reduce breakage. This was a level 2 redesign.

The new spring mounts on the left side escapement torque bar backup stud (07-13) and a notch cut in the escapement rack (07-10). This notch makes this level rack incompatible with earlier racks, so when changing over to this new level it will be necessary to change both the rack and the spring. The same is true for the cam and lever; they must both be changed when either is changed on level 1 machines. Cam and lever are level 2.

The escapement rack pitch selection gear (07-23) has also been redesigned with a longer stop lug. This eliminates the need for the stop spacer (07-108). When installing this new style gear, it will be necessary to remove the spacer.

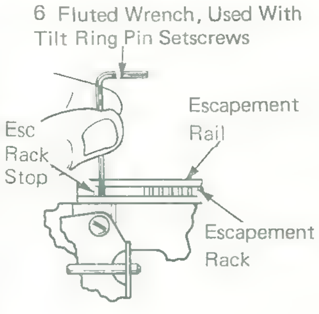
Note: If level 3 control bracket (07-20) part number 1206847 is used, it will be necessary to use the entire torsion spring level half-backspace mechanism.

The earlier level 2 bracket (07-20) part number 1204505 will work with the torsion or compression spring levels.

ADJUSTMENTS:

1. With the escapement rack in the 12 pitch mode, adjust the escapement rack gear (07-23) flush against (no clearance) the cam level (07-107).
2. With the rack still in 12 pitch, position the setscrew (07-111) in the escapement collar (07-105) to the front of the machine and adjust the collar left-to-right against the stop lug on the escapement rack control bracket (07-20) after moving the escapement rack approximately .045" to the left.

   The .045" adjustment can be made by inserting a 6 fluted wrench (used to adjust the tilt ring setscrews) between the right end of the escapement rack and the stop pin in the right end of the escapement rail (Figure 1).



View Is Looking At The Back Of Machine On Left End

Figure 1

3. Adjust the operating lever link (07-112) for proper operation within the top cover slot.

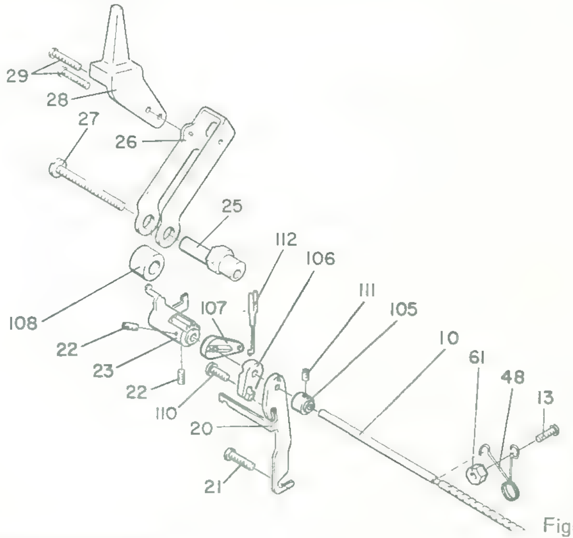


Figure 2

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
07	10	1206844	8X3 Escapement Rack	4.10
	10	1206845	8X5 Escapement Rack	3.50
	20	1206847	Escapement Rack Control Bracket Level 3	.25
	23	1205965	Escapement Rack Selector Gear	.60
	48	1206842	Torsion Spring	.10
	105	1205961	Collar	.20
	106	1205966	½ B/S Cam	.06
	107	1205963	½ B/S Cam Lever	.05
	111	1164096	Collar Setscrew	.10
	112	1072780	½ B/S Operating Lever Link	.20

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

Use Applicable Service Code.

273 SERVICE INFORMATION

11-20-74

Model 8XX

(Revised) 1-15-75

SUBJECT: Shift Cam — Redesigned — "Selectric" II Typewriter

PURPOSE: The plastic shift cam has been replaced by a sintered steel cam. A redesigned shift spring retaining plate (16-55) is used. It locks the spring lug into place, preventing "walkoff." A level 2 detent (16-212) and new overthrow stop are used.

SOLUTION: A Bill of Material is available to convert any "Selectric" II Typewriter and 7X3 and 7X5 "Selectric" Typewriter to the new level shift cam. It will be necessary to order the shift bearing (16-31), P/N 1174331, when converting early level "Selectric" and "Selectric" II typewriters which have the shift cam backup roller. Order (16-210) and also, order (16-300) B/M 1287396 if the machine has other than the current level one-piece shift arm (16-105).

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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353 SERVICE INFORMATION

12-28-77

Model(s): 7X1, XX3, XX5 (Revised) 7-12-78

SUBJECT: Feed Rolls — Marking Original (A Frame Paper Feed)

If experiencing feed roll marks on original copy, replace with light gray insert feed rolls. These feed rolls are made of a material that is resistant to chemical reactions with carbon and copied paper.

The rubber is also softer and can be used to reduce carbon markings. Also use weaker spring (22-87).

The part number remains the same.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
22	87	1128350	Spring	4	.10
	286	1147576	Feed Roll, Front 7X1	1	2.25
		1147579	Feed Roll, Front 7X3, 8X3	1	2.25
		1147580	Feed Roll, Front 7X5, 8X5	1	2.25
	287	1147577	Feed Roll, Rear 7X1	1	2.25
		1138080	Feed Roll, Rear 7X3, 8X3	1	2.25
		1128138	Feed Roll, Rear 7X5, 8X5	1	2.25

354 SERVICE INFORMATION

12-28-77

Model(s): All (Revised) 7-12-78

SUBJECT: Index Pawl — Misalignment

If experiencing intermittent problems with the index pawl (20-432) camming out of the platen ratchet (12-20), remove the washer between the platen bushing (12-22) and the "C"-clip (12-21)(Fig. 1). If this method is not effective, replace platen.

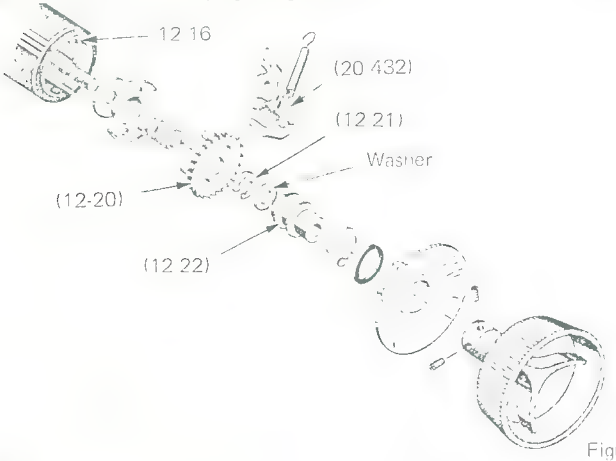

Figure 1

Note: Reporting offices use Mech 12 Ref. 20 when time is spent removing washer.

355 SERVICE INFORMATION

12-28-77

Model(s): 8X3, 8X5

SUBJECT: Cable C/R Transport With Rotary B/S

The transport cable (24-43) has been resized to a common length for both the 8X3 and 8X5 machines with rotary backspace. The color has been changed to light brown for identification.

The resized cable will have the same P/N as the 8X3 cable.

ADJUSTMENTS: Remain the same.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
24	43	1204677	Cable, C/R Transport (8X3-8X5)	1	2.15

356 SERVICE INFORMATION

12-28-77

Model(s): All (Revised) 7-12-78

SUBJECT: Stop, Eccentric Overthrow — Redesigned

The index overthrow (OT) stop has been redesigned (Fig. 1). An adjusting eccentric has been added to the OT stop to aid in making adjustments. When replacing OT stop (20-452) on machines with eccentric OT, the new level stop must be used.

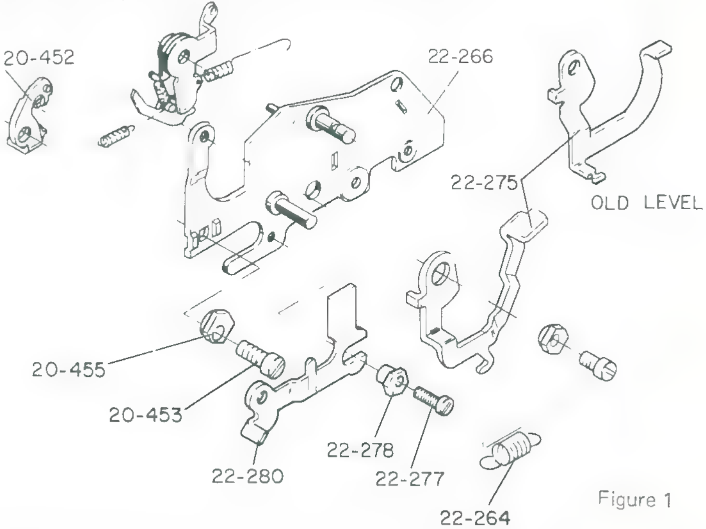

Figure 1

The platen latch (22-275) has also been redesigned to prevent interference between eccentric and platen latch. The new style latch is compatible with all level machines. When replacing old level latch, the spring (22-264) must be changed to new level (short spring).

The detent asm. (20-471) has also been redesigned (Figure 2) for compatibility with the eccentric overthrow stop. The ratchet tooth identification will be stamped on the detent asm. The old style detent asm. is not compatible with the eccentric overthrow paper feed asm.

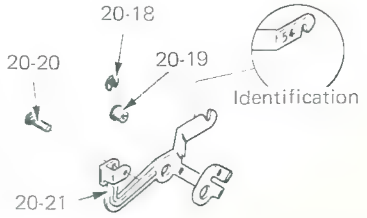

Figure 2

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
12	32	1290935	Det. Rel. Lev.	1	.75
20	18	251989	Clip	1	.02
	19	1290610	Roller, 54T Ecc. OT	1	.15
	20	1290631	Stud, 54T Ecc. OT	1	.07
	21	1290619	Lever, 54T Ecc OT	1	.30
	452	1290611	Stop, Index OT	1	.25
	453	38282	Screw, OT Stop	1	.05
	455	1290630	Eccentric, OT	1	.05
	470	1290691	Lever, 54T Ecc. OT, 721	1	*
	471	1290624	Detent Asm. 54T Ecc. OT	1	.55
	471	1290692	Detent Asm. 54T Ecc. OT, 721	1	*
	471	1290625	Detent Asm. 45-48T Ecc. OT (Order Ref. 18, 22)	1	*
	471	1290626	Detent Asm. 24T Ecc. OT	1	.75
	471	1290627	Detent Asm. 27T Ecc. OT	1	.60
	471	1290696	Detent Asm. 24T Ecc. OT, 721	1	*
	471	1290628	Detent Asm. 36T Ecc. OT	1	3.00
	471	1290629	Detent Asm. 31T Ecc. OT	1	*
	499	1287922	24T B/M Ecc. OT	1	*
	500	1287923	54T B/M Ecc. OT	1	*
	501	1287921	45-48T B/M Ecc. OT	1	*
22	264	1290621	Spring Ecc. OT	1	.03
	275	1290613	Latch 8XX	1	.15
	275	1290697	Latch 7XX	1	.30
	277	38353	Screw	1	.08
	278	1124378	Eccentric	1	.10
	280	1290612	Bracket Eccentric O/T	1	*

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357 SERVICE INFORMATION

12-28-77

Model(s): All

SUBJECT: Oil Wick — Return Cam Follower Roller — New

PURPOSE: An oil wick has been added to the return cam follower roller (25-204) to reduce wear (Fig. 1). This wick is field installable and has been included in the field replacement B/M (P/N 1287354).

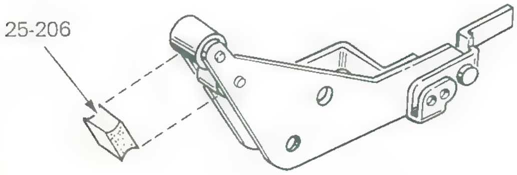

Figure 1

The oil wick should be saturated with oil and inserted between the roller and brace (25-204).

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
25 206	1187194	Oil Wick	1	.05

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

358 SERVICE INFORMATION

12-28-77

Model(s): 7XX, 8XX

SUBJECT: Indexing Conversion B/M 54 to 27 Tooth

Conversion from 54 tooth indexing to 27 tooth is now possible by changing three parts: the detent roller (20-19), the platen ratchet (12-20), and the lever (20-322). This B/M is compatible with all level 54 tooth index mechanisms.

When converting from 54 to other ratchets, consult the indexing chart located in the back of the "Selectric" Part No./Price List for the necessary parts (Figure 1).

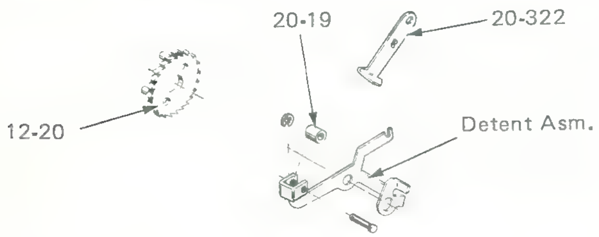

Figure 1

ADJUSTMENTS: Adjustments remain the same as the 54 tooth mechanism. See "Selectric" CEM 295.

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
20 516	1279010	54 to 27 Tooth Conversion B/M Includes:	1	*
322	1279009	Lever 27 Tooth	1	*
19	1279008	Detent Roller, 27 Tooth	1	*
12 20	1164463	Ratchet, 27 Tooth	1	4.25

359 SERVICE INFORMATION

12-28-77

Model(s): 7X3, 7X5, 8XX

SUBJECT: Paper Bail Arms — Universal

A universal paper bail arm for "Selectric," "Selectric" II and Correcting "Selectric" typewriters is now available (Fig. 1). This will remove all other paper bail arms and allow one standard part. This change does not affect the 7X1.

On some early level machines, it may be necessary to use washer (26-210) (Fig. 1) on the inside of the left-hand paper bail to remove any interference with the platen latch. The washer is available in Parts Packet No. 8.

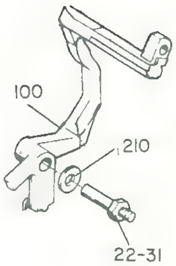

Figure 1

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
26 74	1206095	Paper Bail Arm, Right	1	.35
100	1206094	Paper Bail Arm, Left	1	.35
210	1072477	Washer	1	PP8

Note: When replacing the non-correcting arm, it will be necessary to order the left and right-hand arms.

360 SERVICE INFORMATION

2-22-78

Model(s): 8XX

SUBJECT: Wobbler Spring — Removed

The wobbler spring (15-26) has been removed from production machines. The ribbon lift arm spring (15-78) supplies restoring motion to the wobbler. It is not necessary to install the spring on new machines or to replace the spring when working with this mechanism on machines presently in the field (Fig. 1).

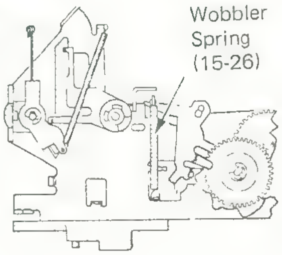

Figure 1

361 SERVICE INFORMATION

5-3-78

Model(s): 7XX "Selectric" Typewriters

SUBJECT: Vent Grills

PURPOSE: Vent grills for "Selectric" (7XX) typewriters will be available in black only. Colored vent grills will remain available until existing stock is depleted, then substituted to black.

362 RELIABILITY

5-3-78

Model(s): 8XX

SUBJECT: Torque Limiter Arbor — Defective

PURPOSE: Some machines may have reached the field with edge of the torque limiter arbor (25-11) rounded (Figure 1).

SYMPTOM: The rounded edge may allow the torque limiter spring (25-09) to drop between the hub (25-03) and arbor.

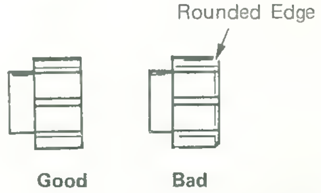

Figure 1

SOLUTION: Change arbor.

MACHINES AFFECTED: 8X5/3688555 — 3721131, 8X3/1921645 — 1933765.

Use Service Code 32

This CEM Expires 5-3-79

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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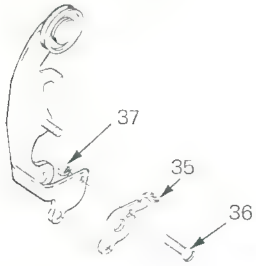
363 SERVICE INFORMATION

5-31-78

Model(s): 7XX, 8XX

SUBJECT: Shift Arm, Universal

PURPOSE: The shift arm has been redesigned to a universal arm. The new arm is used for standard shift machines and shift sensing machines. The part number for the universal arm will be the same as for the current standard shift arm (16-105). To convert to shift sensing, order the parts required.



New Universal Arm (16-105)

Old (16-105) Standard Arm

Old (41-31) Shift Sensing Arm Obsolete

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
41	35	1164406	Hook, Shift Sense Cable	1	*
	36	1142214	Screw	1	*
	37	2114985	Nut	1	*

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

364 SERVICE INFORMATION

5-31-78

Model(s): 7XX and 8XX

SUBJECT: Carrier Return Interlock Clip — Redesigned

PURPOSE: The C/R interlock clip (03-626) has been redesigned to eliminate possibility of rotating on the interlock link.

SYMPTOM: Keyboard locks while typing due to the clip rotating on the interlock link.

SOLUTION: Install redesigned part. The part number and adjustments remain the same.

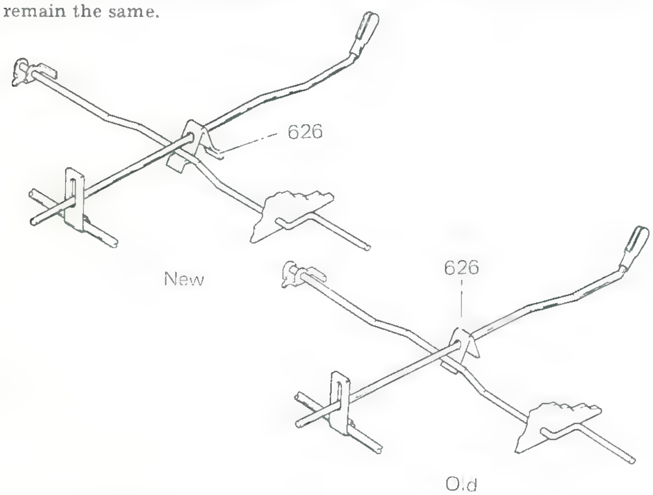


Fig. 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
03	626	1147401	Clip	1	.04

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

365 RELIABILITY

5-31-78

Model(s): 8XX Selectrics

(Revised) 7-12-78

SUBJECT: Double Index — Plant Installed

PURPOSE To identify wrong parts installed in double index mechanism.

SYMPTOM: With incorrect parts installed, the Index Mechanism will cycle only once or will give extra cycles.

SOLUTION: Check the index bellcrank (20-14) and the index latch (03-405). The double index parts shown below should be installed to correct the unreliable cycling of the operational cam.

ADJUSTMENTS: Remain the same

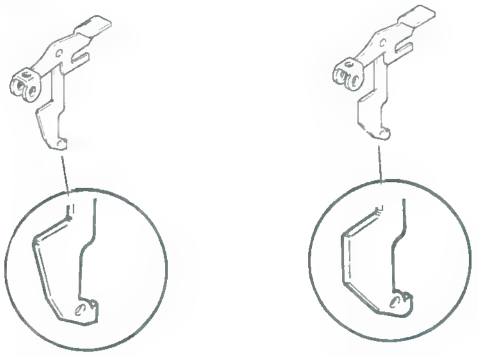


Fig. 1

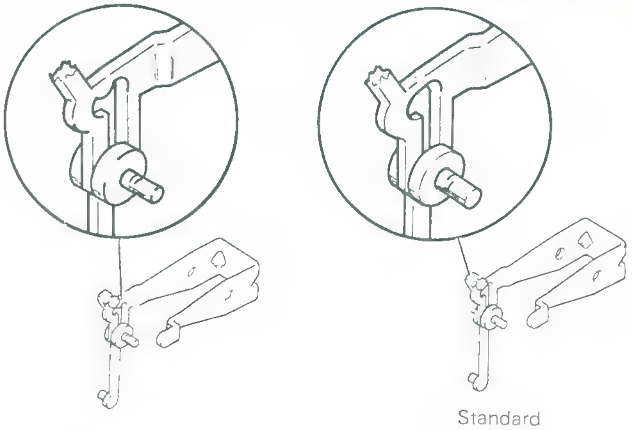


Fig. 2

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
03	405	1287869	Latch 7X1	1	1.75
		1287870	Latch XX3, XX5	1	1.75
20	14	1287871	Bellcrank XX3	1	1.90
		1287872	Bellcrank XX5	1	1.85

MACHINES AFFECTED: 7X1 — Above approx. 0695967, 8X3 — Above approx. 1762633, 8X5 — Above approx. 3326186

ESTIMATED INSTALLATION TIME: 1.0 Hr.

Note: Use sample line entry below for call reporting

ASST REND OTHER Off 19-21	ASST REND OTHER Terr 22-24	CL 25	PROD CODE 28 29	SERIAL 30 36	SVC CODE 37 38	I F A 39	MILE 40 42	OTHER EXPENSE 43 46	MECH CODE 48 49	FAIL CODE 50 51	PART REF 52 54	PART 55	OT 61 63	TVL Hrs 64 66	TOTAL HOURS 67 69
					17						363				

Machine Serial
Blank
CEM No

Use Service Code 32

This CEM Expires 5-31-79

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366

RELIABILITY

7-12-78

Model(s): 8X3 Selectric Typewriters

SUBJECT: Court Reporting Platen

PURPOSE: To identify incorrectly ground platens. Court reporting platens are identified with an "0" stamped in the left end plug. Some court reporting platens (12-16) may have reached the field ground to the same diameter as a standard platen and still have the "0" identification.

SYMPTOM: Experiencing incorrect linespacing, when all adjustments appear correct and a "0" is stamped in the end plug of the platen.

SOLUTION: Replace the platen.

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
12 16	1290726	Court Reporting Platen	1	25.00

MACHINES AFFECTED: Approximately 8X3 above 26-1904200.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .2 Hr.

Use Service Code 17 This CEM Expires 7-12-79

367

RELIABILITY

7-12-78

Model(s): All

SUBJECT: Ball Joint — Out Of Spec.

PURPOSE: Some machines have reached the field with the ball joint (02-414) machined too short on one end and/or the slots cut in an "X" pattern on one end.

SYMPTOM: When experiencing malselection or rotate problems and all adjustments appear correct, check the ball joint.

SOLUTION: Change ball joint.

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
02 414	1124220	Ball Joint	1	1.85

MACHINES AFFECTED: 7X1 0734400 — 0743100, 8X3 1874200 — 1904200, 8X5 3577300 — 3648600

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .1 Hr.

Use Service Code 32 This CEM Expires 7-12-79

368

SERVICE INFORMATION

7-12-78

Model(s): 8XX

SUBJECT: Dual Transport Conversion

PURPOSE: Conversion from the steel cable transport system to the dual transport system is now possible without removing the backplate assembly. The following procedure and parts listed, will reduce conversion time.

REMOVALS:

1. Remove — Covers, platen, deflector and R. H. dust shield.
2. Remove — Switch from switch bracket.
3. Remove — C/R cable and tab cable.
4. Remove — Mainspring
5. Remove — C/R shoe bracket (03-500)
6. Remove — Escapement shaft. This can be done without removing the backplate. Break off the cable tension arm (24-4) (Fig. 1). Hold the tension arm with a screw driver and turn the escapement shaft (with gas pliers). This may damage the escapement shaft hub, which will be replaced with the new level.

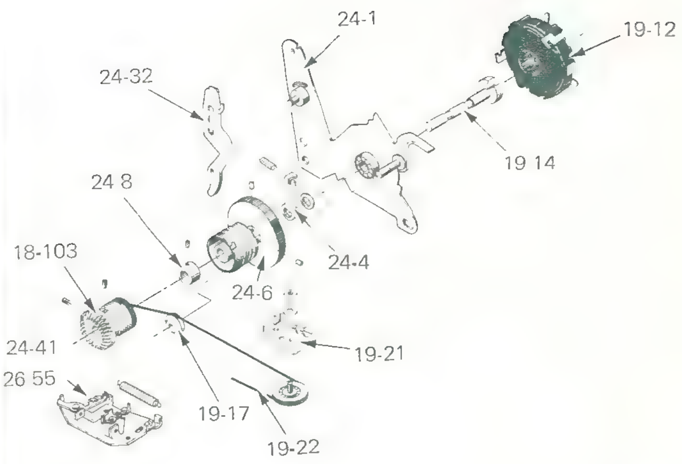


Figure I

This process breaks out the D slot in the tension arm and will allow removal of the escapement shaft from the rear of the machine after set screws are loosened in the tab drum (18-103) and collar (24-8).

7. Remove: The B/S driver (24-32).
8. Remove: The C/R, B/S drum (24-6) through the hole in the bottom of the power frame.
9. Remove: The cord anchor bracket (26-55) (24-41).
10. Remove: The Transport pulley bracket (19-21).
11. Remove: The tab cord pulley (19-17).

INSTALLATION:

Installation of the dual transport parts can be done by reversing the removal procedure (Fig. 2). Use the APM for the adjustment of these components. Also be sure to install the driver mounting stud (24-27) with the head against the backplate. Installation of the C/R steel cable and the tab cord is reviewed below:

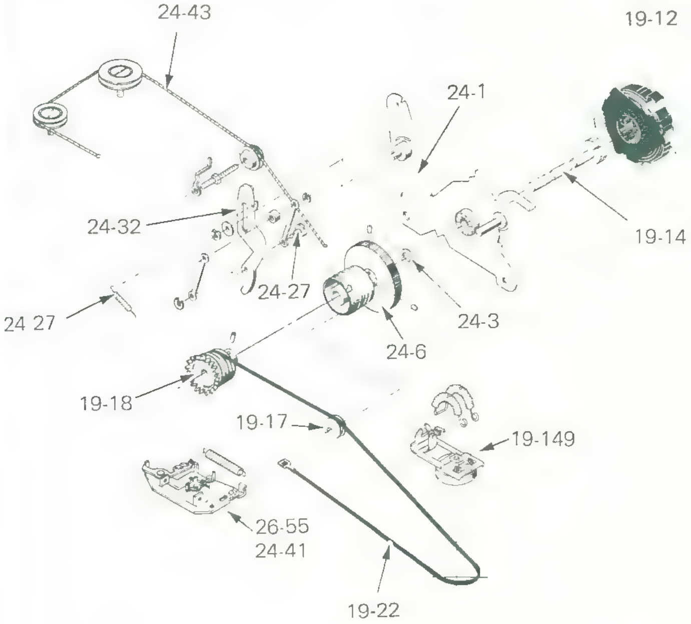


Figure 2

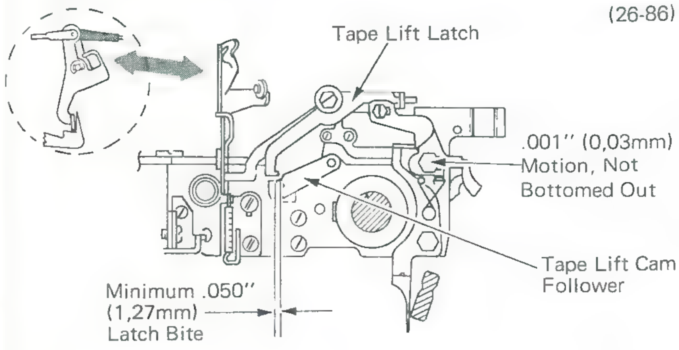
Dual Transport System Installation:

Before installing the tab and C/R cord and cable, all other parts should be installed and adjusted properly.

1. Disconnect the carrier return unlatching link.
2. Manually latch the C/R and turn the turning wheel while counting the number of rotations of the escapement shaft, until the mainspring is wound the proper number of turns (Fig. 3).

(CEM No. 369 CONTINUED)

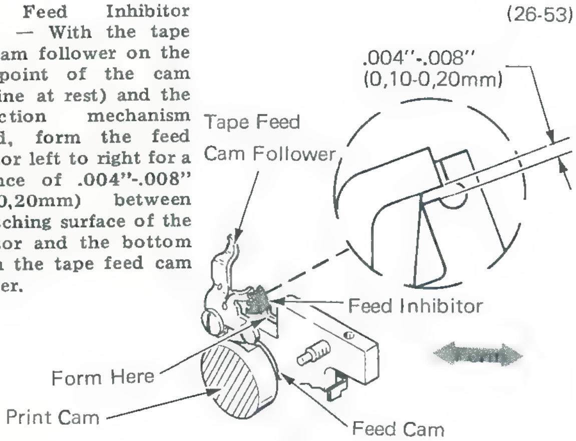
5. **Torque Bar Link Adjustment (Final)** — With the machine at rest and the correction mechanism actuated, adjust the link for a minimum bite of .050" (1,27mm). Also, the actuation arm must not be bottomed against the arms' mounting stud. If there is no forward travel of the arm asm., readjust the link for a minimum of .001" (0,03mm) motion. This is to make sure the system is not choking off.


(26-86)
Tape Lift Latch
.001" (0,03mm) Motion, Not Bottomed Out
Tape Lift Cam Follower
Minimum .050" (1,27mm) Latch Bite

Machine At Rest: Correction Actuated

Figure 7

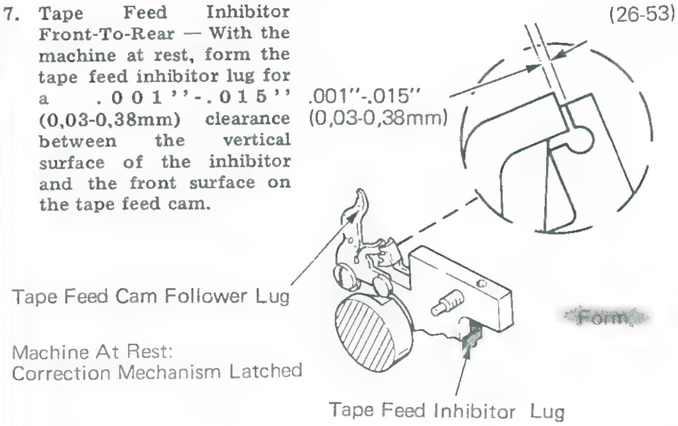
6. **Tape Feed Inhibitor Height** — With the tape feed cam follower on the high point of the cam (machine at rest) and the correction mechanism latched, form the feed inhibitor left to right for a clearance of .004"-.008" (0,10-0,20mm) between the latching surface of the inhibitor and the bottom lug on the tape feed cam follower.



Machine At Rest, Correction Mechanism Latched

Figure 8

7. **Tape Feed Inhibitor Front-To-Rear** — With the machine at rest, form the tape feed inhibitor lug for a .001"-.015" (0,03-0,38mm) clearance between the vertical surface of the inhibitor and the front surface on the tape feed cam.



Machine At Rest: Correction Mechanism Latched

Figure 9

8. The inhibitor actuating bellcrank is preset at the plant and should not have to be adjusted in the field to meet any of the required adjustments. The ribbon feed pawl mounting bracket asm. has been redesigned to mount the torque bar guide clip. This bracket (APM, Frame 262) should be adjusted down to its lowest limits. The adjustment of the feed cam follower bracket to align the pawl in the feed wheel (15-73) (APM, Frame 262) is now performed on the FTB level by forming the rear of the ribbon feed pawl asm. Form the feed pawl asm. to center the feed pawl in the window of the feed wheel.

Note: Check that the ribbon feed pawl mounting stud (Fig. 11) clears the lift control lever by a minimum of .010" (0,25mm) with the machine in the low lift position.

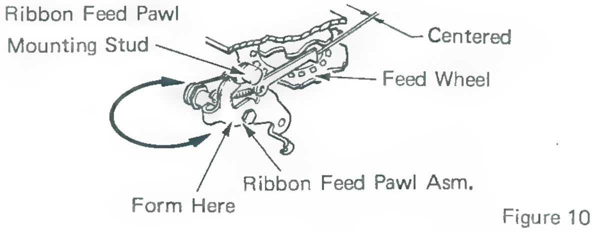


Figure 10

The shift interrupter mounting bracket (26-91) used on the new FTB mechanism is now the same one used on all X3 and X5 non-correcting (16-70); however, it does use a new mounting screw (16-69) (26-92).

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
130	1256142	Support, Asm. X5 —	1	*

MACHINES AFFECTED: Between 8X5 3766450 — 3825229.

Use Service Code 32

This CEM Expires 7-12-79

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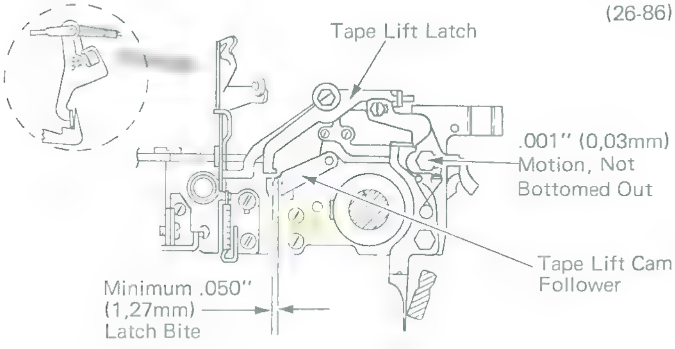
(CEM No. 369 CONTINUED)

5. **Torque Bar Link Adjustment (Final)** — With the machine at rest and the correction mechanism actuated, adjust the link for a minimum bite of .050" (1,27mm). Also, the actuation arm must not be bottomed against the arms' mounting stud. If there is no forward travel of the arm asm., readjust the link for a minimum of .001" (0,03mm) motion. This is to make sure the system is not choking off.

(26-86)

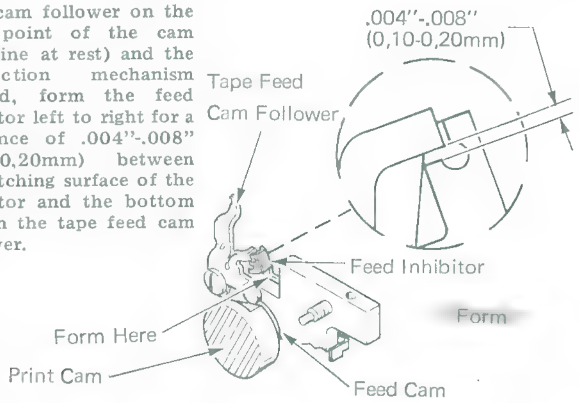

Tape Lift Latch
.001" (0,03mm) Motion, Not Bottomed Out
Tape Lift Cam Follower
Minimum .050" (1,27mm) Latch Bite

Machine At Rest: Correction Actuated

Figure 7

6. **Tape Feed Inhibitor Height** — With the tape feed cam follower on the high point of the cam (machine at rest) and the correction mechanism latched, form the feed inhibitor left to right for a clearance of .004"-.008" (0,10-0,20mm) between the latching surface of the inhibitor and the bottom lug on the tape feed cam follower.

(26-53)

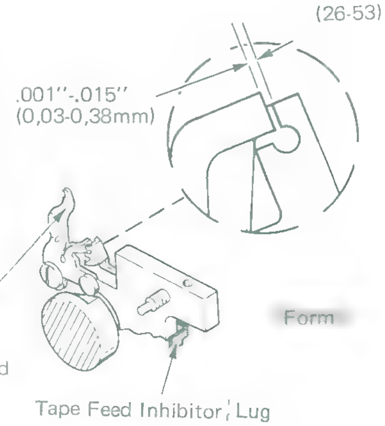


Machine At Rest, Correction Mechanism Latched

Figure 8

7. **Tape Feed Inhibitor Front-To-Rear** — With the machine at rest, form the tape feed inhibitor lug for a .001"-.015" (0,03-0,38mm) clearance between the vertical surface of the inhibitor and the front surface on the tape feed cam.

(26-53)



Machine At Rest: Correction Mechanism Latched

Figure 9

8. The inhibitor actuating bellcrank is preset at the plant and should not have to be adjusted in the field to meet any of the required adjustments. The ribbon feed pawl mounting bracket asm. has been redesigned to mount the torque bar guide clip. (THIS BRACKET (APM, Frame 262) SHOULD BE ADJUSTED DOWN TO ITS LOWEST LIMITS. THE ADJUSTMENT OF THE FEED CAM FOLLOWER BRACKET TO ALIGN THE PAWL IN THE FEED WHEEL (15-73) (APM, FRAME 262) IS NOW PERFORMED ON THE FTB LEVEL BY FORMING THE REAR OF THE RIBBON FEED PAWL). FORM THE FEED PAWL ASM. TO CENTER THE FEED PAWL IN THE WINDOW OF THE FEED WHEEL.

Note: Check that the ribbon feed pawl mounting stud (Fig. 11) clears the lift control lever by a minimum of .010" (0,25mm) with the machine in the low lift position.

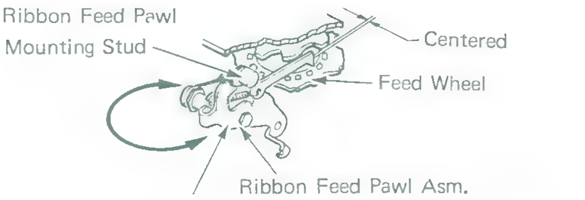


Figure 10

The shift interrupter mounting bracket (26-91) used on the new FTB mechanism is now the same one used on all X3 and X5 non-correcting (16-70); however, it does use a new mounting screw (16-69) (26-92).

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
130	1256142	Support, Asm. X5 —	1	*

MACHINES AFFECTED: Between 8X5 3766450 — 3825229.

Use Service Code 32

This CEM Expires 7-12-79

370 SERVICE INFORMATION

8-23-78

Model(s): 7XX, 8XX

SUBJECT: **Operational Interposer Restoring Bail — Redesigned**

PURPOSE: The operational interposer restoring bail has been redesigned (25-216).

The new bail will fit on the outside of the interposer cage. The stud will be inserted from the outside and the retainer clip on the inside of the operational cage (Fig. 1).

The index operational interposer spring (25-210) must be changed. The new spring (25-210) has the same spring tension. The diameter is smaller so it will not interfere with the lug on the right side of the interposer bail.

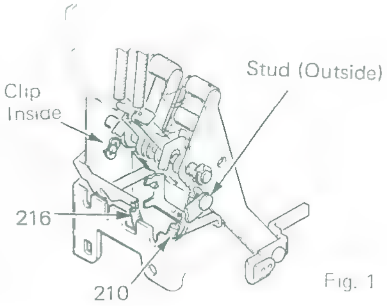


Fig. 1

ADJUSTMENTS: Remain the same.

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
25 210	1256445	Spring	1	02
216	1256444	Bail	1	.25

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

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371 SERVICE INFORMATION

8-23-78

Model(s): 7XX And 8XX

SUBJECT: Solid Balance Arm Conversion

Former level adjustable balance arm is no longer available. Orders will be substituted to the solid balance arm.

SOLUTION: When installing the solid balance arm in the old level rotate bellcrank (23-220), install the two washers as shown (Fig. 1).

Note: The solid balance arm and the one piece rotate arm are compatible, reference "Selectric" CEM 340.

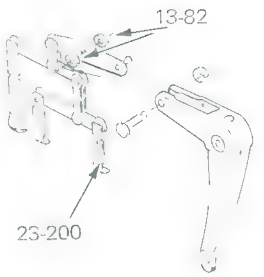


Figure 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
13	82	1092017	Washer	2	.01
23	200	1290667	Solid Balance Arm	1	1.95

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

372 SERVICE INFORMATION

10-18-78

Model(s): 7XX, 8XX

SUBJECT: Index Multiplying Lever Mounting Stud B/M

PURPOSE: Provide a replacement for the multiplying lever mounting stud.

SYMPTOM: Broken rivet in index multiplying lever.

SOLUTION: Replace broken multiplying lever rivet with the stud B/M (25-324) (Figure 1). Individual parts will not be available.

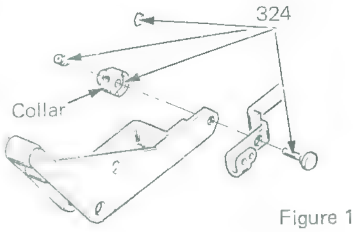


Figure 1

ADJUSTMENTS: Adjust collar for no end play.

Note: The lip on the collar engages the rear of the cam follower to prevent the rotation of the collar.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	324	1256475	Multiply Lever, Mounting Stud B/M	1	4.65

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .5 Hrs.

Use Applicable Service Code

373 SERVICE INFORMATION

10 18-78

Model(s): Dual Pitch Machines

SUBJECT: Tab Set And Clear Bracket

When replacing the grease filled tab rack with the friction rack (18-35) in machines with tie rod paper feed, the set-clear bracket (19-2) should not be changed. The new bracket (19-2) will interfere with the tie rod frame. The old style bracket can be adjusted for proper operation.

374 RELIABILITY

10-18-78

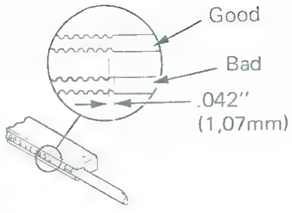
Model(s): 87X, 89X

SUBJECT: Dual Pitch Margin/Escapement Racks — Teeth Cut Incorrectly

PURPOSE: This condition may appear on margin racks (10-22) or escapement racks (7-10). Working surfaces of 10 and 12 pitch rack teeth should line up at position zero, and should repeat at 1/2 inch intervals thereafter. This relationship may be off by as much as .042" (1,07mm) on the defective racks (Figure 1).

SYMPTOM: Unable to adjust overbank in both 10 and 12 pitch. To check for a defective rack, observe the zero position rack teeth while switching between 10 and 12 pitch. (Make a reference mark or scribe line on the rail.) The working surface of the 10 and 12 pitch teeth should not appear to change positions on a good rack.

SOLUTION: If there is a difference between 10 and 12 pitch rack teeth at position zero, change the rack.



Note: Margin Rack Shown; Observe Escapement Rack In Similar Manner

Fig. 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
7	10	1206844	8 X 3 ESC Rack, Level 3	1	4.80
		1206845	8 X 5 ESC Rack, Level 3	1	5.15
10	22	1205537	Rack, Margin 8 X 3	1	2.80
		1205538	Rack, Margin 8 X 5	1	3.00

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32

This CEM Expires 9-1-79

375 SERVICE INFORMATION

11-1-78

Model(s): 8XX With Selective Ribbon

SUBJECT: Flaking And/Or Excessive Ribbon Dust

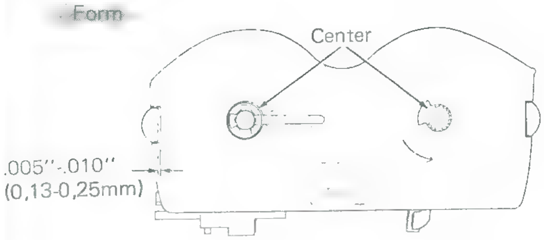
PURPOSE: Checks and adjustments to minimize flaking and excessive ribbon dust when using correctable film/carbon film ribbon.

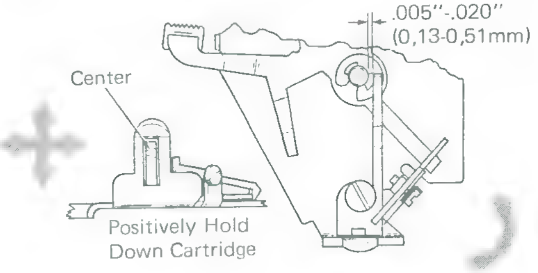
SYMPTOM: Carbon specks on original, or excessive ribbon dust buildup in the carrier.

SOLUTION:

Make the following ribbon mechanism adjustments to minimize flaking and buildup of ribbon dust.

1. Clean Carrier And Ribbon Area — All carbon buildup must be removed from lift guides. Lubricate lift guides with light film of no. 23 grease on sliding surfaces.
   Note: An excessive carbon dust buildup in the carrier area can identify a problem. Inspect the parts and adjustments around the carbon buildup. This must be cleaned from the machine to avoid transferring to the paper.
2. Cartridge Guides (15-86) And Cartridge Retaining Springs (15-59) — Check for proper centering and positive latching of cartridge.





Continued

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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As of January, 1976 the current "Selectric" Typewriter CEMs begin on page 47 (reissued 11-15-78). A complete set of CEM materials consists of the Combined Service Information Book (F/N 241-5114-0, dated May, 1978), the Technical Information Index found in the back of the current Part Number/Price List (F/N 241-5103) and CEM pages 47 and above.

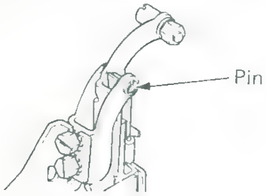
206 RELIABILITY

Models 7XX, 8XX

6-13-73
(Revised) 11-14-73

CYCLE CLUTCH PINS – WEAR

Some "Selectric" Typewriters were shipped to the field with soft cycle clutch latch pins (21-528). If experiencing cycle clutch unlatching problems check this pin for wear.



REF	PART NO.	DESCRIPTION	PRICE
28	1175545	Pin	.05

MACHINES AFFECTED:

7X1 — 9520177 — 9530670
7X3 — 9707897 — 9725250
7X5 — 9626310 — 9644550
8X3 — 1115521 — 1148260
8X5 — 2144247 — 2187110

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

This CEM Expired 8-1-74

223 SERVICE INFORMATION

Models 7XX, 8XX

10-17-73
(Revised) 2-22-78

HEAD PLAY – EXCESSIVE

If experiencing excessive head play, the cause may be attributed to contaminated ball joints (02-414) (dog bone), or out of specification parts.

Replace the dog bone, lower ball socket, tilt ring and tilt ring pins (bullets).

Note: The tilt detent setscrews can be adjusted by using the new tilt detent wrench (T05-7).

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	414	1124220	Ball Joint	1	1.85

THE FOLLOWING INFORMATION FOR IBM USE ONLY

This CEM Expired 5-1-76

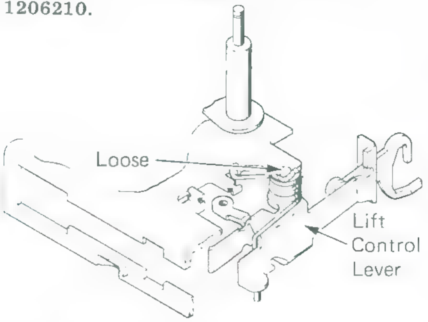
225 SERVICE INFORMATION

Models 7XX, 8XX

10-17-73

LIFT CONTROL LEVER MOUNTING POST – LOOSE

If experiencing intermittent ribbon lift failiures with the selective ribbon system, check the mounting post of the lift control lever (15-76). If loose, replace ribbon plate assembly (15-151) P/N 1206661 or (26-106) P/N 1206210.



THE FOLLOWING INFORMATION FOR IBM USE ONLY.

Use Applicable Service Code

235 SERVICE INFORMATION

Models 7XX, 8XX

1-16-74

SUBJECT: Shift Detent Spring – Plastic Cam

PURPOSE: Redesigned detent spring (16-216) used on 7X1 is now on all production level "Selectric" typewriters.

Note: Detent spring (16-216) can be used on early level plastic cam machines to give more reliable shift detenting. Clamp (16-218) must also be installed.

Caution: This is not a fix for improper shift adjustments or worn parts.

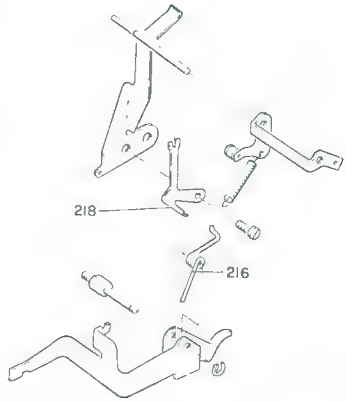


Figure 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
16	216	1174187	Spring	.05
	218	1205820	Bracket	.20

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .2 hours.

Use Applicable Serv. Code

236 SERVICE INFORMATION

Models 7XX, 8XX

1-16-74

SUBJECT: Type Element – Labanotation

PURPOSE: Labanotation is a graphic system of recording human body movement. The Labanotation element is designed for use in areas that study expressive and behavioral aspects of body movement, e.g., choreography, physical therapy, etc.

This typestyle is a very fine line design and **must** have a manual velocity control B/M (21-554) installed. The type is designed to be used with 10 pitch only, and requires a 45 ratchet B/M.

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PARTS REQUIRED:

MECH/REF.		PART NO.	DESCRIPTION	PRICE
02	180	1167206	Element — Labanotation	$18.00

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

243 SERVICE INFORMATION

3-13-74

Models XX3, XX5

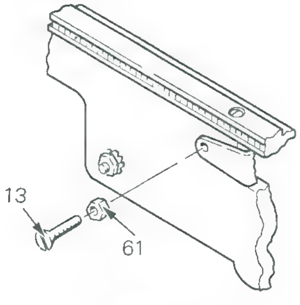
SUBJECT: Escapement Torque Bar Backup Stud — Left Side

PURPOSE: Stabilize torque bar flexing.

SYMPTOM: Escapement failures on the left side of the machine.

SOLUTION: If escapement failures on the left side of machine cannot be corrected by normal adjusting, install left side backup stud (07-13) and nut (06-61).

ADJUSTMENTS: With center torque bar backup stud adjusted correctly (CEM 199), adjust left side backup stud to just touch torque bar at rest. If necessary, readjust stud to obtain .008"-.010" pawl tail clearance on the left side.



Rear View

PARTS REQUIRED:

MECH/REF.		PART NO.	DESCRIPTION	PRICE
07	13	1206494	Screw, Torque Bar Backup	.20
06	61	37913	Nut, Dual Pitch	PP07
	61	1205770	Nut, Single Pitch	.10

MACHINES AFFECTED: Plant installed above approx. S/N 7X3 9776269, 7X5 9698365, 8X3 1253404, 8X5 2341364.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

245 SERVICE INFORMATION

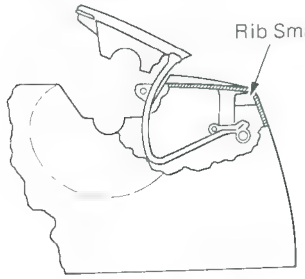
3-13-74

(Revised) 4-24-74

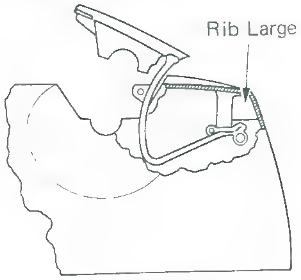
Models 8XX

SUBJECT: Cover Hinge And Bracket — Redesigned

PURPOSE: Replace both the cover hinge (05-006/049) and bracket (05-004) when either needs replacing on old level machines.



Old Level



New Level

PARTS REQUIRED:

MECH/REF.		PART NO.	DESCRIPTION	PRICE
05	4	1166191	Bracket	.15
	6	1451810	Hinge, RH	.65
	49	1451811	Hinge, LH	.65
	127	1172184	Washer — Use With Old Level Cover	.15

MACHINES AFFECTED: All "Selectric" II's

THE FOLLOWING INFORMATION FOR IBM USE ONLY

254 SERVICE INFORMATION

5-8-74

(Revised) 1-15-75

Models 7XX, 8XX

SUBJECT: Margin Set Lever — Redesigned

PURPOSE: The margin set lever has been redesigned to increase the clearance between the margin set lever and the center cover trim. The mounting holes for the pointer bracket have been elongated to prevent the pointer from hitting the margin set lever.

On machines prior to the change it will be necessary to change the margin set levers in pairs.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
09	15	1206498	Lever, Charcoal Gray	.25
	15	1206497	Lever, Navy	.25
	15	1206496	Lever, Blue	.25
	15	1206495	Lever, Accent Gray	.25

Note: P/N's for assemblies that include the lever remain the same.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

PARTS INFORMATION: Reorder P/N's 1272734, 1272735, 1272736 and 1274860 and then scrap existing stock.

257 SERVICE INFORMATION

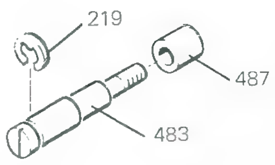
6-5-74

Models 7XX, 8XX

SUBJECT: Rotate Bellcrank Mounting Stud — Redesigned

PURPOSE: Mounting stud (23-483) has been redesigned to prevent breakage and facilitate replacement of the stud or rotate bellcrank.

This change uses a spacer (23-487) instead of the hex-headed nut used previously.



PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
23	219	332747	Retainer	.04
	483	1123735	Stud, Rotate Bellcrank Mounting	.20
	487	1206794	Spacer	.20

MACHINES AFFECTED: Plant installed above approx. S/N 7X1-0214900; 7X3-0413310; 7X5-0311514; 8X3-1305080; 8X5-2419340.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

PARTS INFORMATION: Scrap existing stock of P/N 1123735 and reorder using same part number.

259 SERVICE INFORMATION

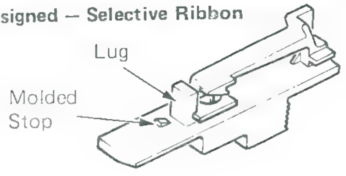
6-5-74

(Revised) 2-22-78

Models 8XX

SUBJECT: Stencil Lever — Redesigned — Selective Ribbon

PURPOSE: Stencil lever (15-80) has been redesigned with a molded stop to prevent the lever from popping out of the ribbon plate when pushed too far left.



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(CEM No. 368 Continued)

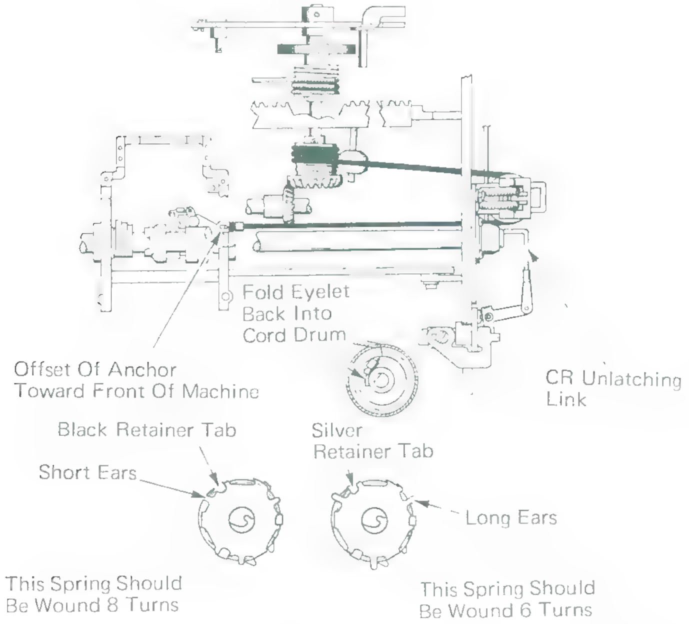

Figure 3

3. With the carrier all the way to the left, connect the tab cord to the carrier and position the cord through the right power frame and around the transport pulley then connect it to the front drum (Fig. 3). It is not necessary to wind the cord around the drum. With the cord attached to both ends, unlatch the C/R and guide the cord onto the drum while rotating turning wheel. (This will wind the rest of the cord onto the drum) then place the cord on the cord pulley (19-17) (Fig. 1).
4. Turn machine on and space or tab the carrier over the operational shaft area for easier installation of the C/R cable. Turn the machine off and be careful not to B/S or C/R, because it will unwind the tab card. Next, loosen the set screws in the B/S drum. With the machine off, cycle a B/S operation until the driver engages the ratchet. This will help in the installation of the C/R cable.
5. Attach the cable to the anchor bracket (use the fork end of a spring hook), run the cable around the pulleys and tilt machine up. Hook the cable onto the B/S drum and hold in position while rotating ratchet to wind the excess cable onto the drum. This can be done by releasing the driver from the drum while holding and rotating the drum with the same hand, at the same time hold tension on the cable with a spring hook from the left end of the machine. Do not position the cable around the front pulley and take up all excess cable and then tighten the B/S drum. Hook the cable over the front pulley and check for proper adjustment of the transport pulley (Frame 103).
6. Connect C/R unlatching link.
7. Perform a functional check.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
19	149	1205784	Trans. Pulley B/M	1	2.20
	14	1164561	Escap. Shaft	1	.75
	17	1124628	Pulley	1	.45
	18	1128108	Tab Drum	1	1.20
	22	1175579	Cord	1	.35
24	06	1205779	B/S Drum	1	4.15
	27	1206990	Spring, Driver	1	.10
	28	1204058	Stud, Driver	1	.09
	32	1206908	Driver	1	1.80
	41	1205783	Bracket Dual Transport Sys Correcting	1	1.85
	115	151720	Set Screws	2	pp14
26	55	1290577	Bracket, Dual Pitch FTB	1	.65

NOTE: A B/M will be available at a later date.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: 1 Hr.

Use Applicable Service Code

369 **RELIABILITY**

Model(s): 8X5

7-12-78

(Revised) 11-29-78

SUBJECT: Correcting Mechanism — Molded Plastic Front Carrier Support And Floating Torque Bar (FTB)

PURPOSE: The front carrier support and torque bar asm.' (26-130) material has been changed to molded plastic.

New adjustment procedures were not put into place in the plant until shortly after introduction of the molded plastic parts.

There is a possibility that some machines within the serial range listed below may not have been adjusted according to the new procedure, or may contain defective carrier support and torque bar assemblies.

SYMPTOM: Machine will not correct reliably in center; torque bar cams out of guides in center.

SOLUTION: If experiencing correcting failures on machines within this serial range, and the new adjustment procedure fails to solve the problem, replace the front carrier support and torque bar assembly (26-130).

Note: If adjustment of interposer latch springs (21-4) is necessary, the front carrier support (26-130) must be loosened to permit access to adjustment screw.

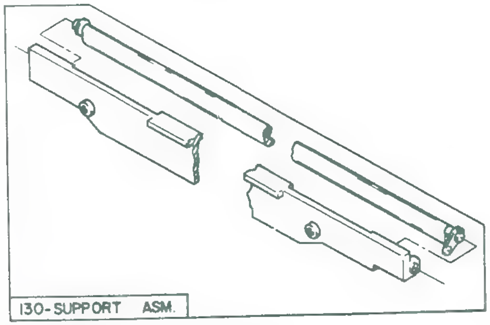

Figure 1

The new adjustments are as follows:

26-132

1. **F.T.B. Back-Up Adjusting Clip — Move the carrier to the left until the adjusting clip is positioned between the intermediate drive gear and the LH side frame. Adjust the clip front-to-rear for .065"-.070" (1,65-1,78mm) clearance between the back-up lug and the front support.**

Note: Check to ensure the clip has not rotated clockwise when tightening causing a bind between the lugs on the guide and the torque bar.

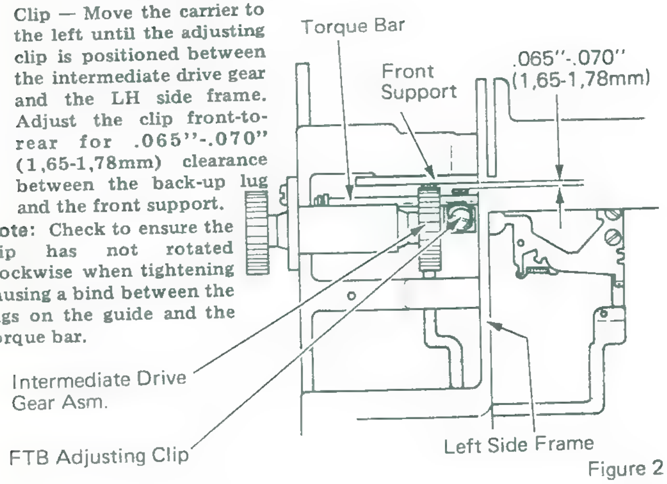

Figure 2

2. **Torque Bar Link (Preliminary) — Manually hold the torque bar vertical and adjust the torque bar link clevis to just span the distance to the correction bellcrank. The pin in the clevis must be in the front most position of the elongated slot in the bellcrank, reconnect link. THE TORQUE BAR MUST NOW BE VERTICAL.**

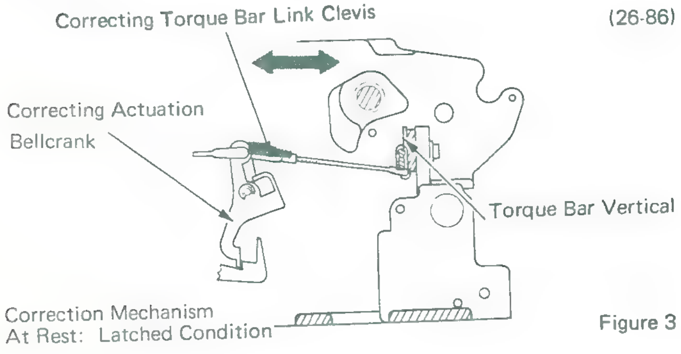
Correcting Torque Bar Link Clevis
(26-86)
Correcting Actuation Bellcrank
Torque Bar Vertical
Correction Mechanism At Rest: Latched Condition

Figure 3

3. **Lift Arm Stop — Adjust the lift arm stop (26-125) for .001"-.005" (0,03-0,13mm) clearance between the working surface of the lift actuation arm and the torque bar.**

Note: The tip of the lift actuating arm must be a minimum of .002" (0,05mm) below the bottom of the torque bar, at the torque bar's lowest point (center of writing line). Raise the front carrier support for .001"-.005" (0,03-0,13mm) clearance with no carrier binds. If adjustment of support does not get clearance below the torque bar, form the actuating arm down. Check to ensure the lift actuating arm is free of binds if forming was required.

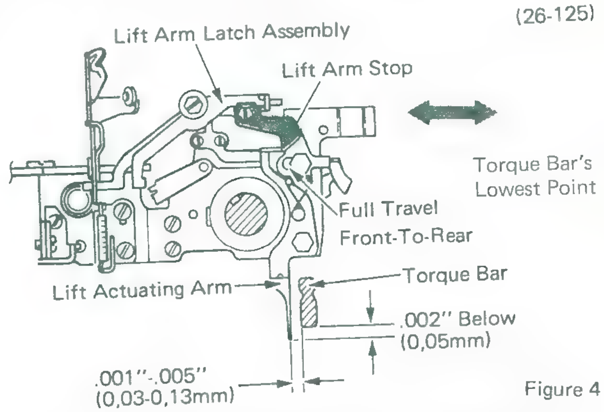

Figure 4

4. a. **Tape Lift Latch Front-To-Rear — With the machine at rest, adjust the lift latch front-to-rear for .001"-.010" (0,03-0,25mm) clearance between the rear of the tape lift cam follower and the front lug on the tape lift latch.**

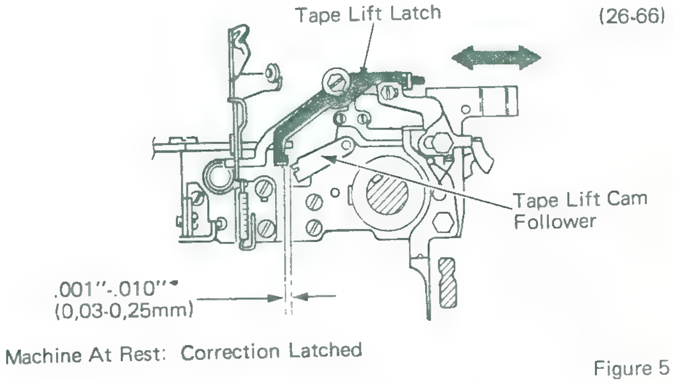

Figure 5

   b. **Tape Lift Latch Height — With the machine at rest and the correction mechanism actuated, adjust the tape lift arm latch vertically for a .005"-.025" (0,13-0,64mm) clearance between the bottom of the latch and the lift cam follower.**

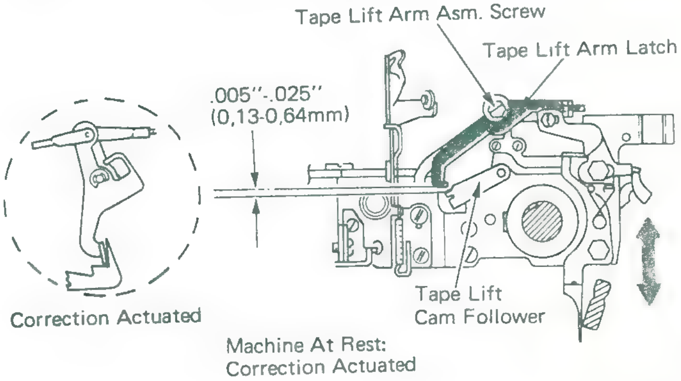

Figure 6

CONTINUED

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

IBM *Office Products Division Customer Engineering ● "IBM", "Executive", IBM "EXECUTARY" and "Selectric" are registered trademarks of the International Business Machines Corp.*

336 SERVICE INFORMATION

3 23-77

Model(s): 7XX & 8XX

SUBJECT: Rotate Adjustments

"Selectric" Manufacturing is now adjusting rotate selection with a new electronic rotate homing system, which compenstates each rotate band for selection system wear and typehead drift. This new procedure uses the -5 latch screw to adjust balance instead of the conventional balance lever adjustment.

If it is necessary to readjust the rotate mechanism, the current field method should be used. In the near future a redesigned balance lever and rotate arm will be incorporated. A new rotate adjustment procedure will be available at that time.

337 RELIABILITY

4 6-77

(Revised) 6-15-77

Model(s): 8XX

SUBJECT: Dual Pitch Tab Lever Spacing — Binding

When a dual pitch tab lever binds, check the spacer (19-70) that is located between the tab lever (19-69) and the tab trigger (19-71). It may be cracked or broken.

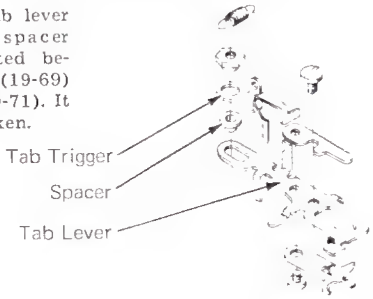

Figure 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	Qty.	PRICE
19	70	1204255	Spacer	1	.10

MACHINES AFFECTED: 8X3 between approx. S/N 1690000 & 1769400. 8X5 between approx. S/N 3150700 & 3320000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32.

This CEM Expires 3-1-78

338 RELIABILITY

4 6-77

Model(s): 8XX

SUBJECT: Correcting Selectric — Stalling During Corrections

PURPOSE: Some machines may have reached the field with a binding correcting tape feed.

SYMPTOM: Stalling during a correction operation.

SOLUTION: Check for two possible conditions: Some machines may have reached the field with two washers (26-7) installed. Also, it is possible that some washers are out of specification and can apply excessive pressure. If two washers are found, remove one and if binding still occurs, replace washer and lubricate with No. 23 grease.

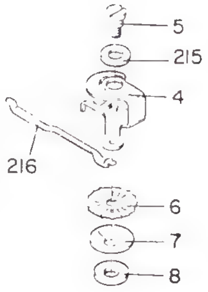

Figure 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
26	7	1206033	Washer	1	.05

MACHINES AFFECTED: 8X3 between approx. S/N 1690000 & 1769400 8X5 between approx. S/N 3150700 & 3320000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Service Code 32.

This CEM Expires 3-1-78

339 SERVICE INFORMATION

4-6-77

Model(s): 7XX, 8XX

SUBJECT: Top Cover Hinge — Redesigned

PURPOSE: The top cover hinge has been redesigned to a friction type bracket. If replacing a hinge or bracket below the serial number range listed below, it will be necessary to replace the components (Fig. 1).

ADJUSTMENTS: Remain the same.

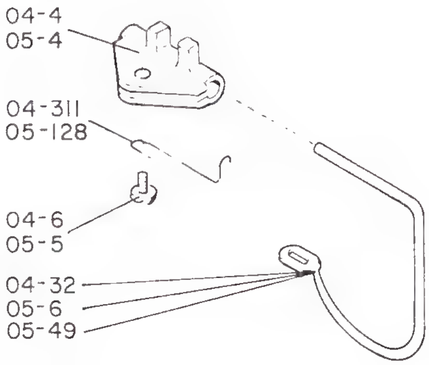

Figure 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
04	4	1206815	Bracket, Plastic	2	*
	6	1206914	Screw, Used With Plastic Bracket	2	*
	32	1206986	LH Top Cover Hinge 7XX	1	*
	32	1206987	RH Top Cover Hinge 7XX	1	*
	311	1206849	Grounding Wire (Used With Plastic Bracket) One Per Mach.	1	*
05	4	1206815	Bracket, Plastic	2	*
	5	1206914	Screw, Used With Plastic Bracket	2	*
	6	1206912	RH Top Cover Hinge (Used With Plastic Bracket)	1	*
	49	1206913	LH Top Cover Hinge (Used With Plastic Bracket)	1	*
	128	1206849	Grounding Wire (Used With Plastic Bracket) One Per Mach.	1	*

NOTE: A B/M will be released at a later date.

MACHINES AFFECTED: 7X1 above approx. S/N 4161710, 7X5 above approx. S/N 4788645, 7X5 above approx. S/N 4444350, 8XX below approx. S/N 1276632 and 2380509.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: Scrap existing stock of P/Ns 1166191, 1451810 & 1451811 and reorder P/Ns 1206815, 1206912 & 1206913. Also scrap existing stock of P/Ns 1164101 & 1164102 and reorder P/Ns 1206986 & 1206987.

Use Applicable Service Code

340 SERVICE INFORMATION

4-6-77

(Revised) 6-15-77

Model(s): 8XX

SUBJECT: Rotate Mechanism — Redesigned

PURPOSE: The rotate arm and balance lever have been redesigned to improve adjustments. The balance lever has been changed to a solid lever and the balance adjustment is made by adjusting the -5 latch stop screw (Fig. 1). The rotate arm has been changed to a 2-piece arm (Fig. 2) and the motion adjustment is made by sliding the lower portion of the arm up or down.

The -5 stop screw is adjusted to obtain proper balance between positive and negative selections. Make this adjustment by first half cycling an uppercase "O" and observing its detent entry. Next half cycle a "T" and adjust the -5 stop screw in or out until the detenting of the "T" matches the detenting of the uppercase "O" previously observed.

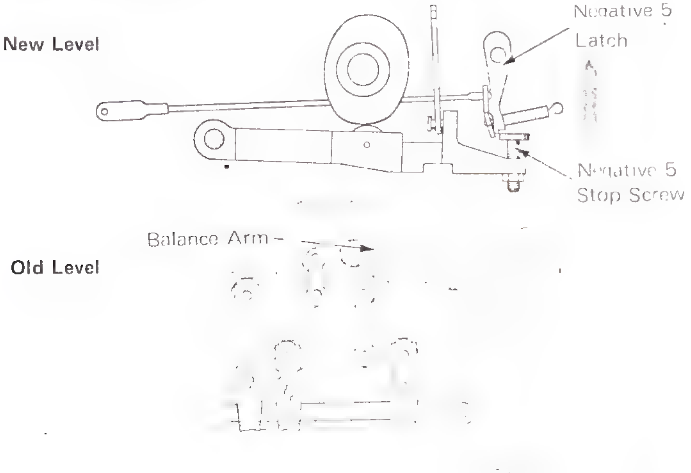

Figure 1

Rotate Arm Motion (2 Piece Arm) - To provide the proper motion in each direction of typehead rotation, the lower portion of the rotate arm must be vertically positioned. The correct position is determined by alternately observing the detenting of the "M" and "W." When the detenting is equal, the lower portion of the arm is positioned correctly.

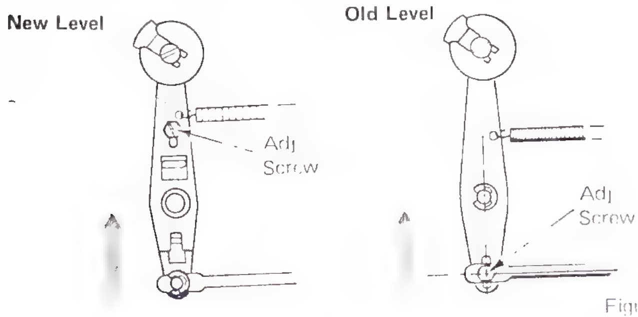

Figure 2

ADJUSTMENTS: All other adjustments remain the same and either the APM or the service manual should be used in conjunction with this CEM.

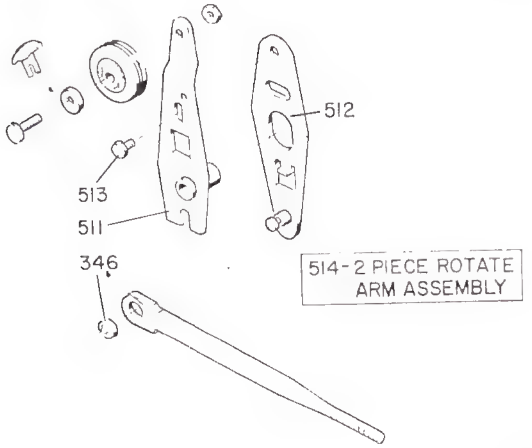

Figure 3

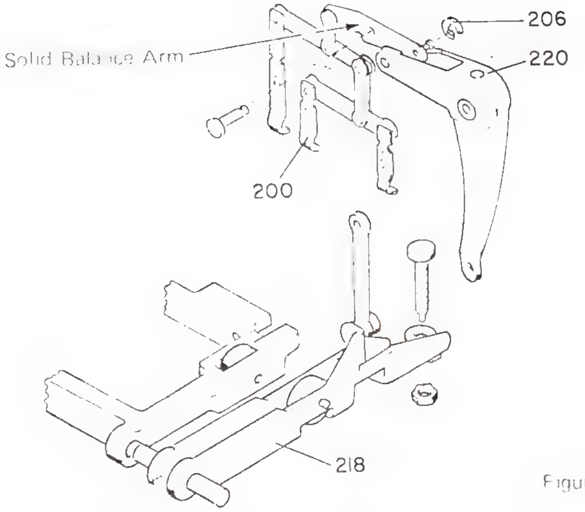

Figure 4

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
23	200	1290667	Rotate Latches — Solid Balance Arm	1.90
	206	1073418	C-Clip	.01
	218	1290787	-5 Latch Bail — Solid Balance Arm	*
	220	1290785	Rotate Bellcrank — Solid Balance Arm	*
	346	1092125	C-Clip	.05
	511	1147195	Upper Rotate Arm — Two Piece	1.15
	512	1290760	Lower Rotate Arm — Two Piece	*
	513	1147429	Screw	.05
	514	1147196	Two Piece Rotate Arm Asm.	2.00

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341 SERVICE INFORMATION

5-4-77

Model(s): 8XX

SUBJECT: Index Transfer Bellcrank, Switch Bracket And Backspace Index Interlock — Redesigned

The backspace interlock clips (24-19) and the index transfer bellcrank shaft clip (03-632) have been removed. The new parts have locking lugs that hold the parts together. When replacing either switch bracket (20-14), backspace interlock (24-20), or the index bellcrank shaft (3-617), it will be necessary to change all three parts below the S/N ranges listed.

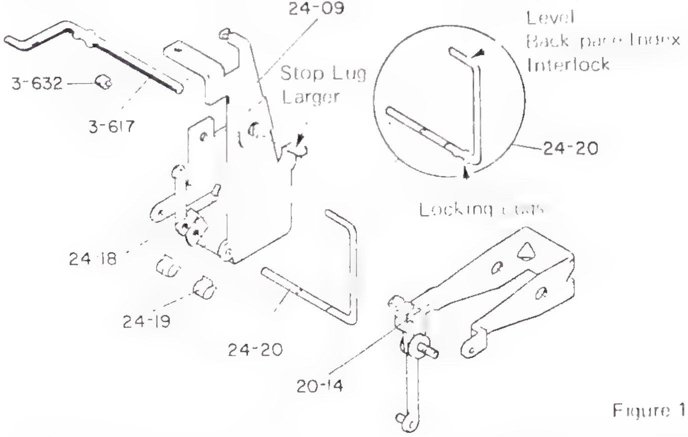

Figure 1

MACHINES AFFECTED: 8X3 below approx. S/N 1640000; 8X5 below approx. S/N 3054000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .5 hrs.

PARTS INFORMATION: All part numbers remain the same; also, the shaft clips will still be available for replacement.

Use Applicable Service Code.

342 RELIABILITY 5-4-77

Model(s): 7XX, 8XX

SUBJECT: Print Quality — Platen Height Adjustment

PURPOSE: To improve print quality problems, such as tails on the characters and poor edge definition, or if the platen cannot be adjusted low enough to get even top and bottom print, check the platen height adjustment with the platen gauge (APM frame 194).

SOLUTION: With the platen gauge installed and the platen adjusted for .030" (0,76mm) clearance between the top of the platen and platen gauge, the platen should need only slight adjustment to get even top and bottom. If the platen height eccentrics require excessive adjustment downward for even top and bottom print, the yoke (02-520) could be the problem. The tilt detent slot may be off location.

Since this condition cannot be visually detected, it is recommended the yoke be changed before attempting further print related adjustments.

Refer to tilt ring and rotate shaft removal procedure in service manual (p. 226) for service hints.

ADJUSTMENTS: After replacing yoke, check all print adjustments with emphasis on homing and skirt clearance after adjusting the position of the yoke.

1. Position the yoke rotationally under its mounting screws so the density of the left and right sides of a printed character is uniform (Figure 1).

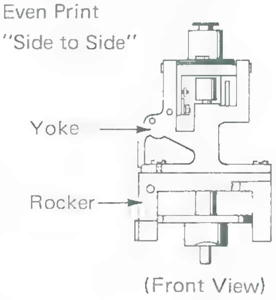

Figure 1

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
02 520	1128434	Yoke	1	*

MACHINES AFFECTED: 7X1 — approx. S/N 676137 to 685230, 8X3 — approx. S/N 1707447 to 1736931, 8X3 — approx. S/N 3206675 to 3268887.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: 1.0 hrs.

Use Service Code 32.

This CEM Expires 4-10-78.

343 SERVICE INFORMATION 5-4-77

Model(s): '8X3, 8X5 — Dual Pitch

SUBJECT: Margin Rack Toggle Spring — Removed

PURPOSE: The margin rack toggle spring (10-28) has been removed on all Dual Pitch "Selectric" IIs. The escapement rack gear toggle spring (07-24) has been replaced with a stronger spring to provide the necessary tension to toggle both the escapement rack and margin rack. When either the margin rack or escapement rack toggle springs require replacement on machines with both springs, remove both springs and install the stronger escapement rack spring.

ADJUSTMENTS: Remain the same.

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	PRICE
07 24	1290908	Escapement Rack Toggle Spring	.04

MACHINES AFFECTED: Plant installed above approx. S/N 8X3 — 1736931, 8X5 — 3268887.

344 SERVICE INFORMATION 5-4-77

Model(s): 8XX Correcting "Selectric"

SUBJECT: Correcting Tape Take Up Spool Interfering With Paper Feed

If experiencing problems with the correcting tape take up spool interfering with the top edge of cards or forms, the new level lug (Fig. 1) can be formed to the right. This keeps the paper from hitting the upper flange of the take up spool. Also, it may be necessary to readjust the lug front-to-rear for clearance to the platen (APM frame 307).

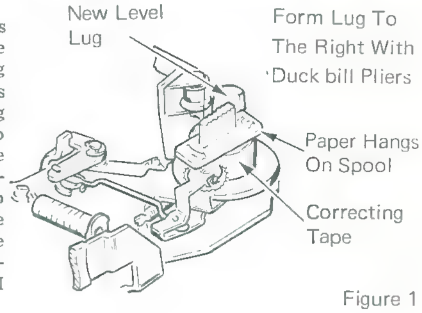

Figure 1

345 SERVICE INFORMATION 5-4-77

Model(s): 7XX & 8XX (Revised) 12-28-77

SUBJECT: Operational Clutch Wheel — Wearing

If experiencing a repeating spacebar and backspace operation, check the adjustment shown in Figure 1. Insufficient bite of the clutch release arm (25-239) to the clutch wheel (25-44) can cause premature wear. A repeating operational cam may look like escapement failures (skipping or crowding of characters). Check the latching surface on the clutch wheel; if the latch is rounded, the operational cam on the latch ring should be changed.

NOTE: Check adjustment by manually releasing the latch from the bottom of the machine. Do not check this adjustment by releasing the spacebar as the load of the spacebar interposer will cause an incorrect reading.

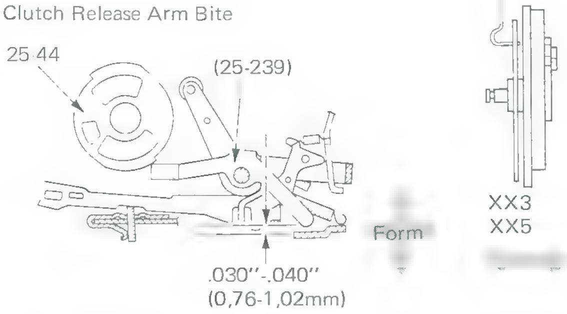

Figure 1

346 SERVICE INFORMATION 5-4-77

Model(s): 8X3, 8X5 — Dual Pitch

SUBJECT: Escapement Torque Backup Screw Nut — Discontinued

The left hand escapement torque bar screw nut (07-61) has been discontinued on all dual pitch "Selectric" II typewriters. The escapement rack torsion spring (07-48) will provide the necessary tension to hold the screw in place.

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347 SERVICE INFORMATION

6-15-77

Model(s): 7XX, 8XX

SUBJECT: Type Element — Orator, Language Arts — New

A new Orator language arts element has been announced for use in the elementary education language arts programs. The Orator L/A typestyle includes the present Orator uppercase letter forms combined with newly designed compatible lowercase letter forms. Also, the character set includes five pronunciation symbols used in elementary education language arts programs (Figure 1).

The 236 language arts keyboard has two dead key positions located in positions 41 and 43.

APPLICATION: This element is not recommended for use with correctable film ribbon. It may be used with all other film carbon and fabric ribbons, but best results are obtained by using the Tech III ribbon with smooth finish bond paper (16 to 20 pound weight) and no carbon copies.

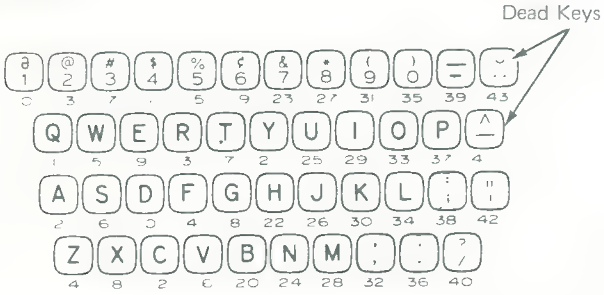


Figure 1

PARTS REQUIRED:

MECH/REF.		PART NO.	DESCRIPTION	PRICE
02	180	1167236	Orator Language Arts Type Element	18.00

348 RELIABILITY

6-15-77

Model(s): All Models

SUBJECT: Latch — Top Cover

PURPOSE: The top cover latch (4-83) 7XX and latch (5-2) 8XX have been strengthened. IF experiencing vibrations with top covers, replace latch (gold in color) with new latch (silver in color).

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
04	83	1141520	Latch (7XX)	2	.05
05	2	1205299	Latch (8XX)	2	.09

MACHINES AFFECTED: Between approx. S/Ns 7XX-6031956-6033770 8X3-1584050-1756773, 8X5-2939243-3312409.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: Scrap old stock and reorder. Part numbers remain the same.

Use Service Code 32

This CEM Expires 6-1-78

349 SAFETY

8-24-77

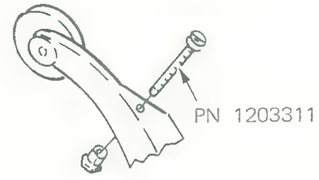
Model(s): 725

SUBJECT: Shift Adjusting Screw.

SAFETY LOCATION: Some reconditioned 725 "Selectric" machines have reached the field with a bristol head lower case adjusting screw in the shift arm. This bristol could cause hand injury when using the hand cycle wheel.

SAFETY PRECAUTION: Check lower case shift adjusting screw on next service call.

SAFETY CORRECTIVE ACTION: Replace bristol-type adjusting screw with fillister head screw (P/N 1203311).



Note: This change applies only to reconditioned 725's that were converted from Selectric I/O's. Part references are shown in the MT/ST—I/O APM (16-49, P/N 1203311).

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .2

Use Service Code 32

This CEM expires 6-24-78

350 SERVICE INFORMATION

8-24-77

Model(s): 7XX-8XX

SUBJECT: Torque Limiter Spring Clamp-Redesigned

PURPOSE: Provide stronger support for torque limiter spring and prevent spring ear from breaking.

SOLUTION: Install redesigned clamp (Figure 1).

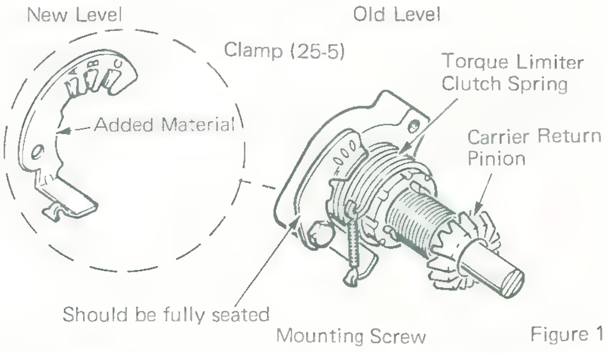


Figure 1

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	5	1290992	Clamp	1	.10

351 SERVICE INFORMATION

9-21-77

Model(s): All Models

SUBJECT: Retainer Clip (Interposer Restoring Bail)

PURPOSE: When replacing interposer restoring bail (25-216), be sure to reinstall retainer clip (25-217) properly as this is a spring loaded clip to hold the bail tight.

If the clip is installed backwards, there will be lost motion in the restoring bail (Figure 1).

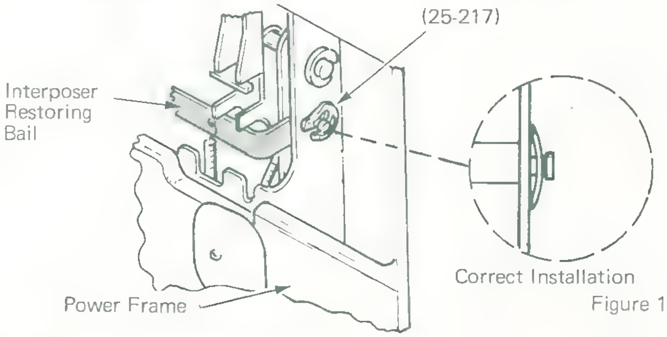


Figure 1

352 SERVICE INFORMATION

9-21-77

(Revised) 12-28-77

Model(s): 8XX, 9XX

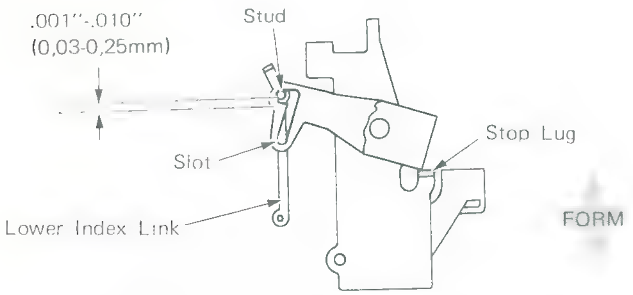
SUBJECT: Customer Set-Up Program

OBSOLETE

(CEM 295 Continued)

3. Index Transfer Bellcrank Stop Lug (Rotary Backspace Only) — Form the index transfer bellcrank stop lug for a .001"-.010" clearance between the stud on the lower index link and the lower horizontal edge of the slot in the index transfer bellcrank. This makes sure that the lower index link stud reliably restores to the front of the slot after a backspace operation.

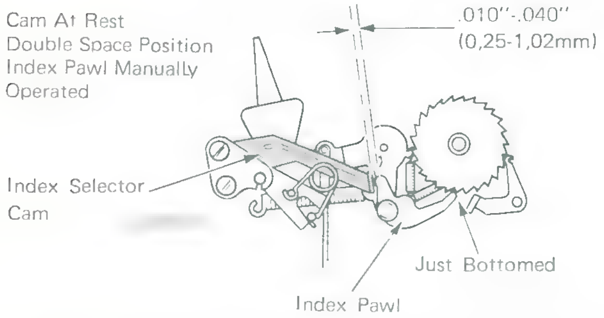
   Note: Check that the Index Transfer Bellcrank does not have excessive side play. This can cause the link to bind in the slot. Add additional clips (P/N 1147155), if necessary.

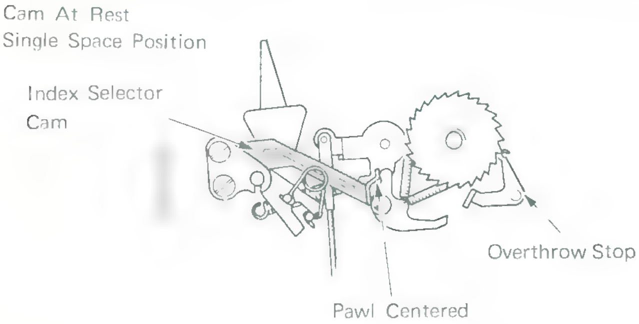


4. Index Selector Cam — With the index lever in the double space position and the index link removed, press down on the pawl carrier until the index pawl is just bottomed in a ratchet tooth. Adjust the index selector cam so a clearance of .010"-.040" can be observed between the working surface of the selector cam and the rear tip of the index pawl.

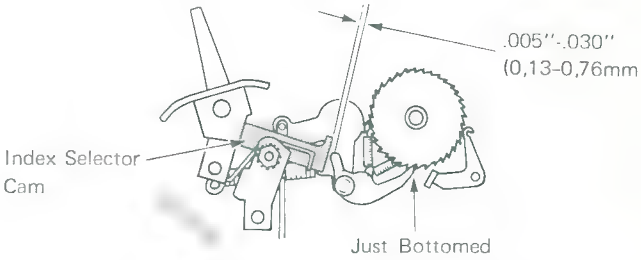
   With the index lever in the single space position, adjust the selector cam vertically so the index pawl is centered on the cam surface.

   These adjustments must be considered together and readjusted until both are correct.

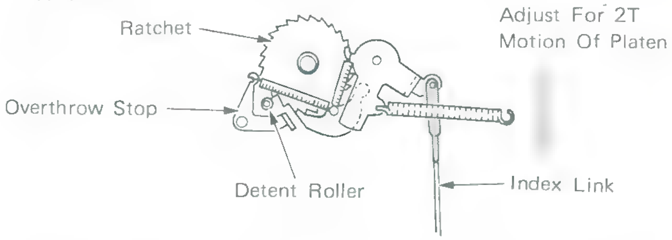




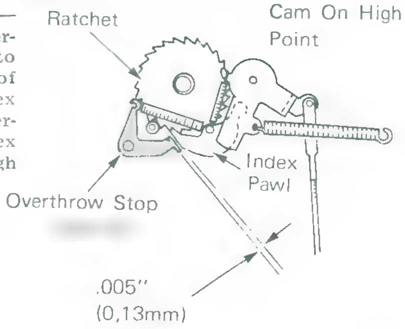
Index Selector Cam 54-Tooth Ratchet — With the index lever in double space and the index link removed, press down on the pawl carrier until the index pawl is just bottomed in a ratchet tooth. Adjust the index selector cam so a clearance of .005"-.030" can be observed between the working surface of the selector cam and the rear tip of the index pawl.



5. Index Link — Loosen the platen overthrow stop and move it to the front of the machine. With the platen installed and the feed rolls engaged, hold the detent roller disengaged from the platen ratchet. Manually cycle a double line space operation. At the end of the cycle, allow the detent roller to reenter the platen ratchet. If the index link is properly adjusted, the detent roller will bottom between the two ratchet teeth without causing any rotational movement to the platen. Adjust the index link clevis to get this condition.



6. Platen Overthrow Stop — Adjust the platen overthrow stop front-to-rear to obtain a clearance of .005" between the index pawl and the platen overthrow stop with the index cam rotated to its high point.



296 SERVICE INFORMATION

7-30-75

Model 8XX

SUBJECT: Dead Key Cable — Breaking

PURPOSE: To prevent dead key cables from breaking, a redesigned correcting mode latch bellcrank is now available.

SYMPTOM: Dead key cable breaking in the escapement trigger area.

SOLUTION: Install the redesigned mode latch (26-80).

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
26	80	1206139	Correction Mode Latch Bellcrank	.40

MACHINES AFFECTED: Plant installed above approx. S/N 8X3-1492000 and 8X5-2780000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

PARTS INFORMATION: Stock is to be scrapped. Refer to flash bulletin No. 39, dated 6-13-75.

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297 SERVICE INFORMATION

7-30-75

Model(s): 7XX, 8XX

(Revised) 12-28-77

SUBJECT: Paper Bail Arm And Platen Knob Screw — Loose

Loose paper bail arm screw (22-002) and platen knob screws (12-2) may be secured by applying Locktite sealant (Type E — P/N 605960) on screw threads before tightening. This will allow removal of screws if necessary.

PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
T24 35	605960	Locktite Sealant	1	*

298 SERVICE INFORMATION

7-30-75

Models 7XX, 8XX

(Revised) 9-21-77

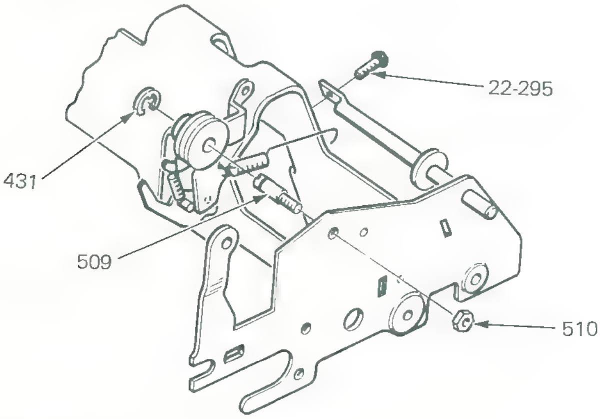
SUBJECT: Index Pawl Assembly Stud — Field Replacement

PURPOSE: A field replacement index pawl assembly stud.

SYMPTOM: Index pawl assembly stud loose or broken.

SOLUTION: Tap the hole of the paper frame (22-49 or 266) with a 4-40 tap or a self-tapping screw such as the one on the index selector lever mounting stud (22-295). Install the stud (20-509) and nut (20-510).

Note: It may be necessary to form the platen latch to the right to remove interference between the nut and latch. Reinstall pawl assembly and "C" clip (P/N 264641).



PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	PRICE
20 431	264641	C-Clip	.04
509	1287877	Replaceable Stud	.40
510	1142264	Nut	.10
511	1287916	Field Replacement Stud B/M (ncludes Ref. 509 and 510)	.50

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

299 SERVICE INFORMATION

10-8-75

Model 8XX

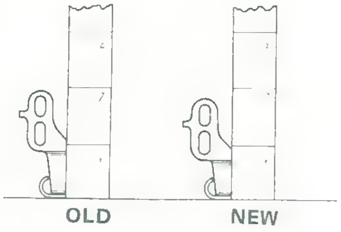
(Revised) 12-3-75

SUBJECT: Selective Ribbon Spread Plate — Redesigned

SYMPTOM: The slots in the spread plate have been lengthened to facilitate adjustment.

SOLUTION: Replace spread plate (15-22). This plate is stronger and has a shorter lever extension.

ADJUSTMENTS: Remain the same.



PARTS REQUIRED:

MECH/REF	PART NO.	DESCRIPTION	PRICE
15 22	1206055	Spread Plate	.30

Note: It is necessary to replace adjusting plate (15-24) on machines below 8X3-1070370 and 8X5-2085674.

MACHINES AFFECTED: Plant installed above approx. S/N 8X3-1520000, 8X5-2825000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Serv. Code

PARTS INFORMATION: Scrap existing stock of P/N 1206055 and reorder.

300 SERVICE INFORMATION

10-8-75

Model 8XX

FEED GEAR ADJUSTMENT — SELECTIVE RIBBON

When replacement of feed gear (15-092) and intermediate gear (15-055) is necessary due to wear of the teeth, be sure the ribbon mode button grip clip is adjusted up or down on the ribbon feed post for .005"-.020" clearance between the lower feed gear and the first intermediate gear (with the mechanism in the film ribbon mode). The bottom of the large ribbon feed gear should be flush with the bottom of the small first intermediate gear.

FILM RIBBON MODE

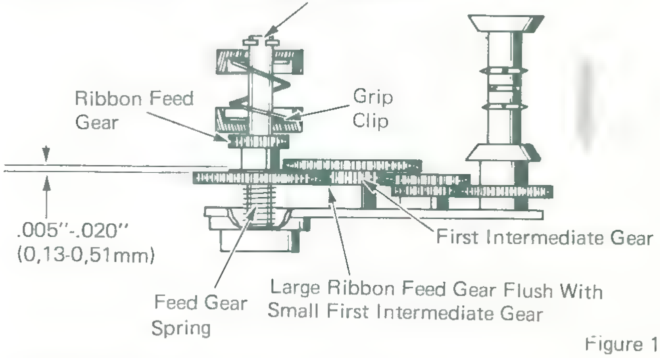

Ribbon Feed Post
Ribbon Feed Gear
Grip Clip
.005"-.020" (0,13-0,51mm)
First Intermediate Gear
Feed Gear Spring
Large Ribbon Feed Gear Flush With Small First Intermediate Gear

Figure 1

If adjustment is necessary—

a. Ensure the load lever spring clears the ribbon feed gear with a minimum of .005" in the ribbon load position. Form the load lever spring.

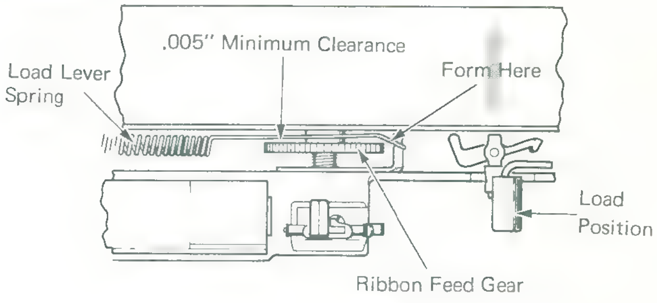


Figure 2

b. Ensure the loadlever spring clears the ribbon cartridge in the operated position. Form spring if necessary.

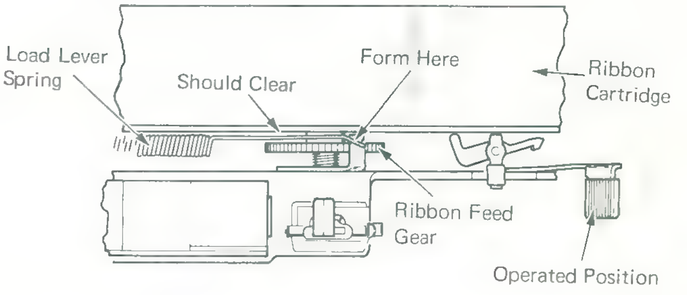


Figure 3

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

IBM *Office Products Division Customer Engineering ● "IBM", "Executive", IBM "EXECUTARY" and "Selectric" are registered trademarks of the International Business Machines Corp.*

(CEM 308 Continued 6-16-76)

SERVICE HINT: If encountering a torque limiter clutch spring with the upright lug broken (lug that is trapped by the clamp), it is possible to provide a new lug by raising the loop with a spring hook and forming the end with the duckbill pliers. The clamp has three adjusting holes which will allow for a proper adjustment after the new lug has been formed. If it is necessary to clip the end of the torque limiter spring, exercise safety precautions.

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
25	14	1123574	Pinion Gear	.30

MACHINES AFFECTED: Approximately serial numbers 7X1-0618000-0625000; 8X3-1541000-1565000; 8X5-2856000-2902000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: Stocks of P/N 1123574 should be sorted for proper surfaces and suspect parts scrapped and reordered.

Service Code 32

This CEM Expires 10-30-76

309 RELIABILITY

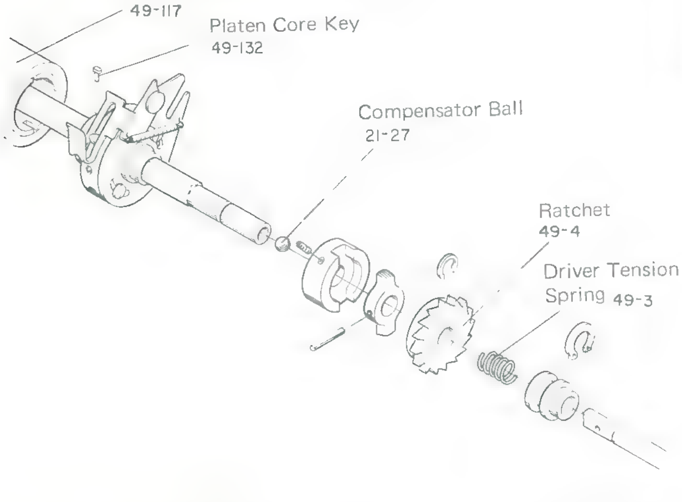
1-28-76

Models 7XX, 8XX

PINFEED PLATEN — ERRATIC LINESPACING

Three areas in addition to adjusting the indexing mechanism (see CEM 295) should be checked when experiencing erratic linespacing.

1. Insufficient driver spring tension (49-3). Check the tension with a spring scale against the left platen knob. It should be 1.5 to 2.5 lbs. just before the driver seats in the ratchet. The tension can be increased by installing a compensator ball (21-27) as illustrated.
2. Some 27 tooth ratchets (49-4), previous to this CEM, may have misaligned serrations. It is recommended the ratchet be changed if erratic linespacing is encountered.
3. Check the platen core key (49-132) for wear and replace the key and core if worn. Metal pinwheels have a replaceable key (P/N 1187957). Black plastic pinwheels have a molded key and replacement of the pinwheel is necessary.



MACHINES AFFECTED: Approximately serial numbers 7X1-0613000-0625000, 8X3-1528000-1565000, 8X5-2833000-2902000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

PARTS INFORMATION: Scrap P/N 1128527 if received before 11-20-75 and reorder.

Service Code 32,

This CEM expires 10-30-76

310 SERVICE INFORMATION

3-10-76

Model: 8XX

(Revised) 12-28-77

CORRECTING MECHANISM — NEW

A new correcting mechanism has been designed to improve serviceability. This change includes a "floating torque bar." All adjustments and parts used with this design will be identified by the abbreviation "FTB." The old style carrier is no longer used. It will be necessary to change to the "FTB" carrier on machines below 8X3-1598062 & 8X5-2967661. When changing to FTB, order the front carrier support asm. (26-130) and mode link (26-086). Also remove bracket (26-089) before installing FTB parts.

Figure 1 shows reference numbers of the new parts.

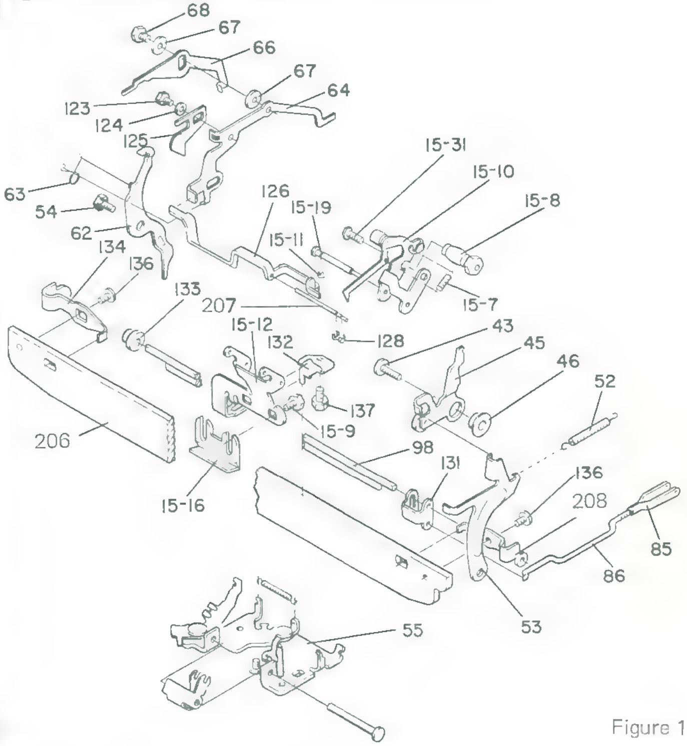


Figure 1

The new adjustments are as follows:

1. FTB Adjusting Clip — Move the carrier to the left until the adjusting clip (15-132) is positioned between the intermediate drive gear train and the side frame (Figure 2).

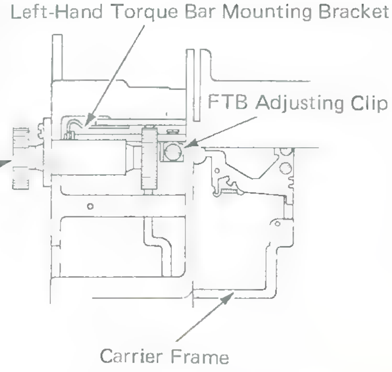

Left-Hand Torque Bar Mounting Bracket
FTB Adjusting Clip
Intermediate Drive Gear Asm.
Carrier Frame

Figure 2

(Continued)

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(CEM 310 Continued 5-18-77)

Adjust the clip, front-to-rear, for a ,010"-.20" (0,25-051mm) clearance between the front lug on the guide and the lefthand FTB mounting bracket (Figure 2A). **Note:** Check that the working surface of the lug is parallel to carrier support after adjustment.

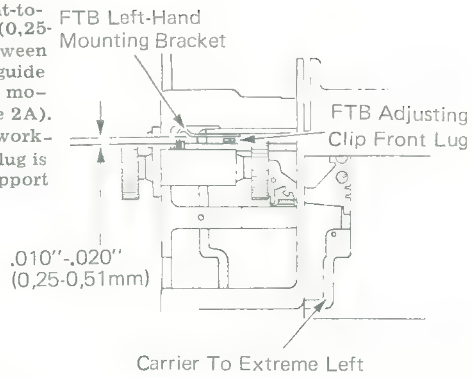
FTB Left-Hand Mounting Bracket
FTB Adjusting Clip Front Lug
.010"-.020" (0,25-0,51mm)
Carrier To Extreme Left

Figure 2A

2. Torque Bar Link — With the correction actuation bellcrank latched and the correcting torque bar vertical, adjust the correcting torque bar clevis to just reach the distance between the front edge of the slot in the correction actuation bellcrank and the vertical torque bar. Then lengthen by two turns and latch clevis to slot.

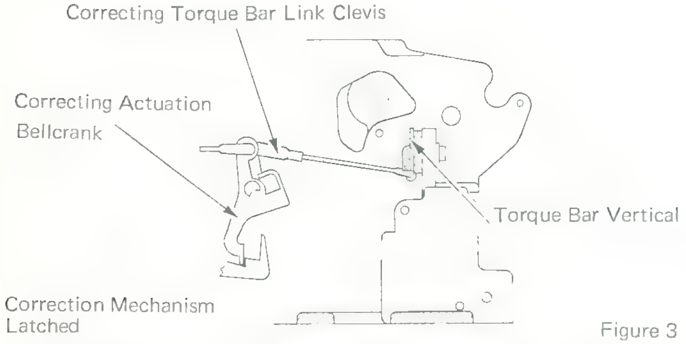
Correcting Torque Bar Link Clevis
Correcting Actuation Bellcrank
Torque Bar Vertical
Correction Mechanism Latched

Figure 3

3. Lift Arm Stop — The lift arm stop is then adjusted for two conditions. Operate the correcting mechanism (Figure 4) and adjust the stop by loosening the screw for full movement of the lift arm latch asm., then tighten screw (Fig. 5). This adjustment must also allow for a minimum of .005" (0,13mm) clearance between the bottom of the working edge of the torque bar and the lift actuating arm when the correcting mechanism is latched. Remove all torque bar play toward the front of the machine when checking for this .005" (0,13mm) clearance.

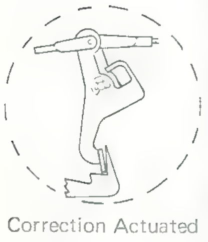

Figure 4

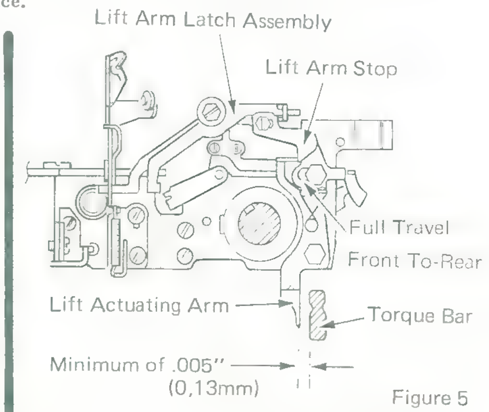

Figure 5

4. Tape Feed Inhibitor Height Adjustment — With the tape feed cam follower on the high point of the cam (machine at rest) and correction mechanism latched, form the feed inhibitor left-to-right, for a clearance of .004"-.008" (0,10-0,20mm) (Figure 6) between the latching surface of the inhibitor and the bottom of the lug on the tape feed cam follower.

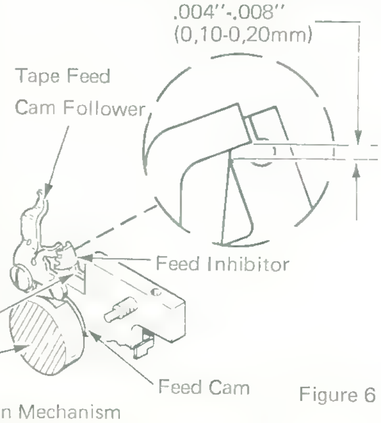
.004"-.008" (0,10-0,20mm)
Tape Feed Cam Follower
Feed Inhibitor
Form Here
Print Cam
Feed Cam
Machine At Rest, Correction Mechanism Latched

Figure 6

5. Tape Feed Inhibitor Front-To-Rear Adjustment — With the machine at rest, form the tape feed inhibitor lug for a .001"-.015" (0,03-0,38mm) clearance between the vertical surface of the inhibitor (Figure 7) and the front surface on the tape feed follower lug.

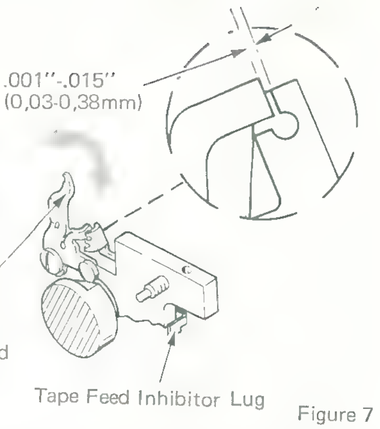
.001"-.015" (0,03-0,38mm)
Tape Feed Cam Follower Lug
Machine At Rest Correction Mechanism Latched
Tape Feed Inhibitor Lug

Figure 7

6. Tape Lift Latch Height Adjustment — With the machine at rest and the correction mechanism actuated (Figure 8), adjust the tape lift arm latch by loosening the lift arm asm. screw and moving the latch vertically for .005"-.025" (0,13-0,64mm) clearance between the bottom of the latch and the bottom of the notch in the lift cam follower.

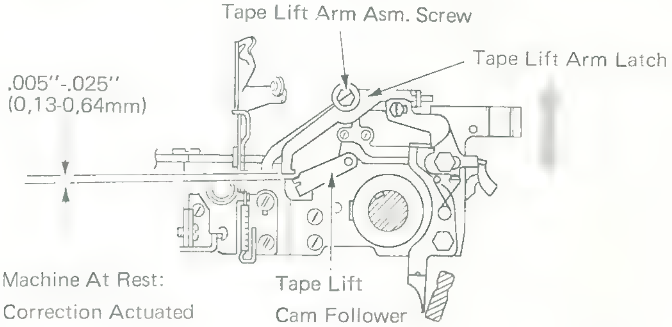

Figure 8

7. Tape Lift Latch Front-To-Rear Adjustment — With the machine at rest and the correction mechanism latched (Figure 9), adjust the lift latch front-to-rear for a min. of .010" (0,25mm) clearance between the rear of the lift cam follower and the front of the lug on the lift latch. With the correction mechanism actuated, the front-to-rear .010" (0,25mm) min. adjustment of the lift latch should allow for a min. of .050" (1,27mm) bite of the lift latch to the tape lift cam follower (Figure 10).

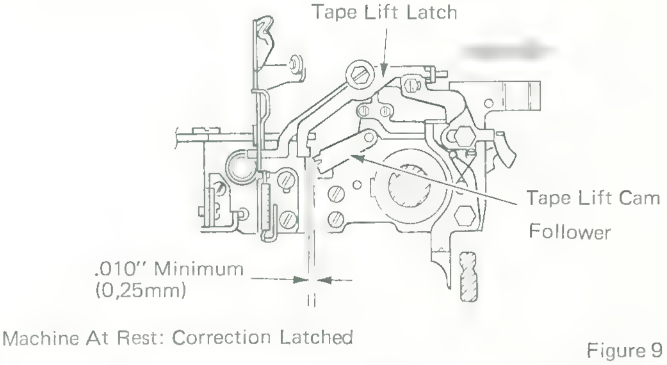

Figure 9

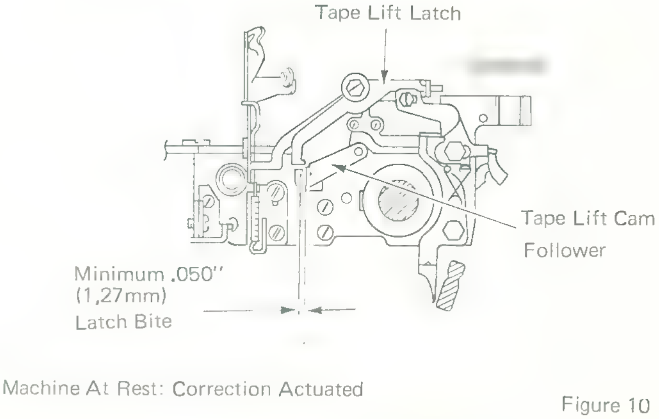
Tape Lift Latch
Tape Lift Cam Follower
Minimum .050" (1,27mm) Latch Bite
Machine At Rest: Correction Actuated

Figure 10

Continued

(CEM 310 Continued 5-18-77)

8. The inhibitor actuating bellcrank (15-53) is preset at the plant and should not have to be adjusted in the field to meet any of the required adjustments. The ribbon feed pawl asm. has been redesigned to mount the torque bar guide clip. The adjustment of the feed cam follower bracket to align the pawl in the feed wheel (15-73) (A/PM, frame 262) is now performed on the FTB level by forming the rear of the ribbon feed pawl asm. Form the feed pawl asm. to center the feed pawl in the window of the feed wheel.

Note: Check that the ribbon feed pawl mounting stud (Fig. 11) clears the lift control lever by a minimum of .010" (0,25mm) with the machine in the low lift position.

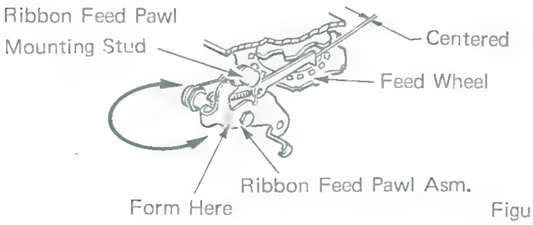

Figure 11

The shift interrupter mounting bracket (26-91) used on the new FTB mechanism is now the same one used on all X3 and X5 non-correcting (16-70); however, it does use a new mounting screw (16-69) (26-92).

PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
15	7	1206510	Spring, Feed Pawl	1	.03
	8	1206623	Follower, Rib. Feed	1	.30
	9	1164939	Screw, Mounting	2	.10
	10	1290572	Follower Asm., Rib. Feed FTB	1	.60
	11	219633	Retainer, Pin	1	.04
	12	1290581	Brkt., Rib. Feed Cam Foll. FTB	1	.10
	16	1164435	Pad, Carrier Sup.	1	.10
	19	1290582	Pin, Feed Foll. FTB	1	.07
	31	1206605	Screw, Feed Foll.	1	.03
26	43	1206321	Screw, Tape Feed Foll. Mounting FTB	1	.03
	45	1290568	Follower Asm., Tape Feed FTB	1	1.05
	46	1206065	Hub, Tape Feed Foll.	1	.10
	52	1071687	Inhibitor Spring-FTB	1	PP12
	53	1290579	Inhibitor, Tape Feed FTB	1	.20
	54	1206163	Stud, Tape Lift Arm Mounting	2	.10
	55	1141624	Brkt., Single Pitch FTB	1	.85
	55	1290577	Brkt., Dual Pitch FTB	1	.65
	58	1206044	Foll., Tape Lift Cam FTB	1	.30
	62	1290574	Arm Asm., Tape Lift Act. Arm FTB	1	.60
	63	1206146	Spring, Tape Lift Act. Arm	1	.10
	64	1290580	Arm, Lift FTB	1	.35
	66	1290595	Latch, Lift Arm FTB	1	.10
	67	1132211	Washer, Tape Lift Asm.	1	.02
	68	1206809	Screw, Tape Lift Asm.	1	.04
	86	1290604	Link, Mode Act. T/B FTB	1	.15
	91	1128189	Brkt., Shift Mtg. FTB	1	.50
	92	1164576	Screw, Shift Brkt. FTB	1	.02
	98	1290588	Bar, Torque X3 FTB	1	4.50
	98	1290589	Bar, Torque X5 FTB	1	6.10
	102	1206212	Carrier B/M Single/P FTB	1	109.00
	102	1206211	Carrier B/M Dual/P FTB	1	109.00
	115	1164580	Screw, Brkt. Mtg. FTB	2	PP2
	123	1172397	Screw, Lift Arm Stop FTB	1	.10
	124	1290605	Washer, Lift Arm Stop FTB	1	.01
	125	1290599	Stop, Lift Arm FTB	1	.04
	126	1290578	Blcrk., Inhibitor Act. FTB	1	.25
	207	1290600	Pin, Inhibitor Act. Bellcrank FTB	1	
	128	251989	Retainer, Act. Blcrk. Pin FTB	2	.06
	206	1290583	Support, Carrier X3 FTB	1	.04
	206	1290584	Support, Carrier X5 FTB	1	3.40 3.40
	130	1290606	Support, Asm. X3 FTB	1	4.15
	130	1290607	Support, Asm. X5 FTB	1	4.15
	131	1290585	Blcrk., Torque Bar FTB	1	3.35
	132	1290601	Guide, Torque Bar FTB	1	.10
	133	1290591	Sleeve, Torque Bar Mounting FTB	1	.04
	134	1290586	Brkt., LH T/B Mounting FTB	1	.03
	208	1290587	Brkt., RH T/B Mounting FTB	1	.09
	136	1290590	Screw, T/B Mounts FTB	2	.08
	137	1147429	Screw, T/B Guide FTB	1	.05
					.02

MACHINES AFFECTED: Above 8X3-1598062, 8X5-2967661.

311 **SERVICE INFORMATION** 3-10-76

Models: All "Selectric" Typewriters

(Revised) 9-8-76

"SELECTRIC" TYPEWRITER SERVICE HINTS

The purpose of this CEM is to acquaint the field with a variety of service hints. Customer engineers may use whatever methods that work best for them, however, the following hints may be useful. We will update this CEM periodically and place previous information into the proper publication:

1. The new operational shaft support bearing (25-304) should be lubricated on each service call.
2. The rotary B/S drum and ratchet asm (24-6) can be removed through the hole in the bottom of the frame by removing the B/S bellcrank upstop (24-116) and the C/R shoe mounting bracket (03-500). This eliminates the need to remove the B/S plate (24-1) when changing the ratchet and drum asm.
3. It is possible to damage some of the operational keybuttons if the "Selectric" Typewriter is stored on its back. Caution should be exercised if this storing condition is encountered.
4. If experiencing transfer of ink from paper feed rollers (22-286, 287) to the original, a single layer of cellophane tape can be wrapped around the rollers. This is pertinent on coated papers such as multilith masters.
5. A paper clip can be used to hook the C/R and tab cords together when replacing the carrier on the "Selectric" Typewriter. This keeps the cords out of the way during carrier replacement and facilitates their reinstallation.
6. It is **NOT** advisable to use the price list on the back of the "Inventory Maintenance Guide," F/N 241-5497-3, as its printing schedule does not allow it to keep abreast of price changes.
7. When adjustment of the steel C/R or tab cables (24-43) (19-22) becomes necessary (within six months of installation) due to stretching of the cables, change the cables as the stretching indicates that the cable strands are breaking.
8. When adjusting the margin switch pitch gear (dual pitch) end play (A/PM, frame 312), it is necessary to remove all of the motion of the rack within the rail to the left. This can be accomplished by holding the rail and moving the rack to the left with the right margin slider.

(Continued)

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(CEM 311 Continued 9-8-76)

9. Partial carrier return: complete carrier return failures and some partial return failures can sometimes be traced to nearly simultaneous operation of spacebar and return (e.g., at the end of a typed line). The condition occurs because spacebar cam follower operates interposer restoring bail before C/R operational latch can be positioned under the index cam follower. Solution: Clip spring, P/N 1090341, to 3/4" length, forming each end and installing it between the C/R operational latch and the rear bottom edge of the spacebar cam follower (Figure 1). The spring should loosely span the distance between parts at rest and not interfere with vertical linespacing.
10. There is an error in the January, 1976 edition of the PN/PL in Mech. 20, Ref. 432. The index pawl carrier asm. for the 24-tooth ratchet is listed under the wrong part number. It should be under P/N 1141595.

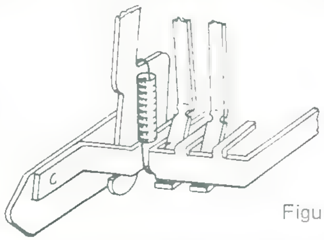


Figure 1

11. If the screw hole in the middle cover (where the top cover hinge mounts) is stripped, a possible fix is to use the self-tapping screw, P/N 1190587, to remount the hinge.
12. The "Selectric" motor is equipped with an internal thermal coupler that acts as a circuit breaker when it becomes overheated due to an abnormal strain on the motor. If a motor that will not start and a bind in the drive mechanism has been diagnosed, it is advisable, after removing the bind, to allow the motor to cool to ensure that the coupler has time to close the circuit, thus avoiding unneeded replacement of the motor due to the thermal coupler.
13. New "Selectric" character interposers are oil impregnated instead of plated. These interposers appear dark in color and, in some cases, are mixed with the plated interposers.
14. The 7/32-3/16" wrench, P/N 9900208, may be formed to aid the accessability of the lower adjusting nut (02-526), which should be loosened to make the skirt clearance adjustment (A/PM, frame 52).
15. It is possible that the new 1/4-5/16" wrench (with blue dot) will not fit the rotate turnbuckle on early level machines. It will fit the locknuts. If experiencing this problem, use gas pliers to adjust the turnbuckle.
16. If experiencing extra cycles, check that the cycle clutch latch shock absorber (21-526) has not slipped from between the latch (21-524) and guide asm. (21-530). Flush excessive grease from shock absorber if necessary.
17. If experiencing a weak index operation after completing the index adj. in CEM 295, check operational shaft support adjustment (25-56). If old level support is on machine, upgrade to new level (refer to CEM 289).
18. Air dry touch-up paint for the "Selectric" Typewriter can be found in the C & D Typewriter Manual, F/N 241-5231-8 (04-89).
19. If you have a broken keylever spring (21-135, 136), it is possible to remove the unused leaf spring from ref. 135 and slide it between the broken leaf spring and the guide comb (ref. 137 or 138) and tighten screws (ref. 140).

312 SERVICE INFORMATION

3-10-76

Models: All "Selectric" Typewriters

KEYLEVER PAWLS – STICKY

It is possible, due to environmental conditions, for the oil used to lubricate "Selectric" Typewriter keylever trip pawls to become crusty or tacky. This results in the keylever trip pawls binding or sticky. To correct this condition, several commercial solvents (WD-40, KROIL, CR556) may be applied to the pawls. These solvents are readily available in most auto parts shops and hardware stores.

After cleaning, the pawls should be relubricated with No. 10 IBM oil, P/N 1280444.

Caution: These solvents should be stored in fire-resistant cabinets and should not be stored in temperatures over 120 degrees F (i.e., cars, in sunlight, etc.). We do not recommend the purchase of those solvents in aerosol cans.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

313 SERVICE INFORMATION

3-10-76

Model(s): 7X1 A-Frame

Carbon Paper Marking

PURPOSE: Provide soft feed rolls to be used in conjunction with weaker springs to minimize feed roll marks on carbon copies. **Note:** XX3 and XX5 rollers will be available at a later date.

SOLUTION: Install soft feed rolls (identified by a blue mark on one end of the shaft) and 7X1 tie rod springs. These feed rolls must be installed in sets and are only available in a B/M.

ADJUSTMENTS: Adjust springs for 16-20 oz. feed roll tension.

PARTS REQUIRED:

MECH/REF.	PART NO.	DESCRIPTION	QTY.	PRICE
22 306	1287986	B/M Rollers & Springs		

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .2 hrs.

Use Applicable Service Code

314 SERVICE INFORMATION

3-24-76

Models: All "Selectric" Typewriters

(Revised) 4-21-76

DOUBLE INDEX MECHANISM

Provides 2, 3, 4 and 6 lines per inch with standard 54-tooth indexing, or 2, 4, and 8 lines per inch with standard 36-tooth indexing for printing and publishing customers with OCR applications. This mechanism provides a second index operation for each carrier return operation, or can be locked out for normal linespacing.

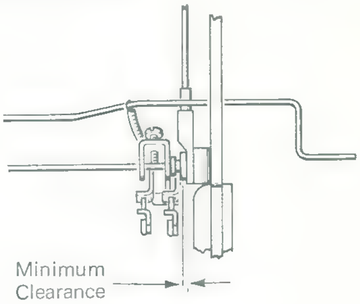
This double index can be installed on all domestic "Selectric," "Selectric" II, and Correcting "Selectric" typewriters, with the exception of machines equipped with the following:

1. Manual velocity control
2. Shift sensing
3. Space to print interlock
4. AVC inhibitor

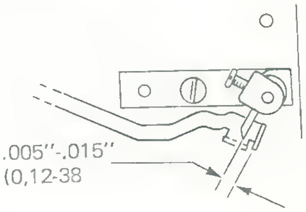
Installation of this double index B/M is billable at current labor rate.

ADJUSTMENTS: All index adjustments must be correct. Refer to PRAM (frame 220 — frame 226).

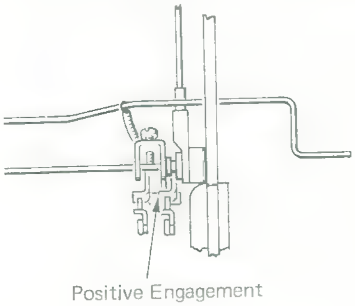
1. Adjust tripper:
   a. Left to right for minimum clearance between the spacer and locator.

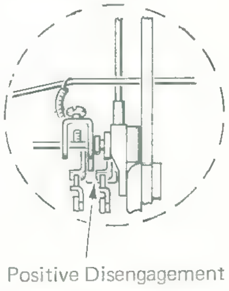


   b. Rotationally for .035"-.045" clearance to the index keylever pawl.

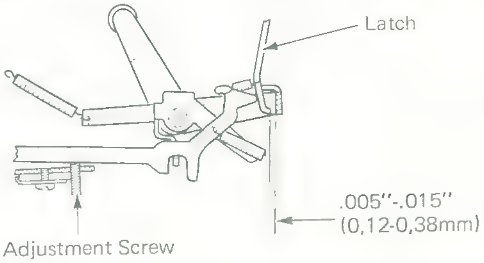


2. Adjust the locator for positive engagement and disengagement of the tripper to index keylever pawl. (Note: Spacer, Reference 41, may not be needed on all machines. Keylever pawl guides may be spread slightly to increase clearance to facilitate positive disengagement.)





3. Adjust CR interposer adj. screw for a latch clearance of .005"-.015" (0,12-0,38mm).



Note: If experiencing extra C/R cycles, increase this adjustment to .030".

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26]

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334 **SERVICE INFORMATION** 2-23-77

Model(s): "Selectric" Typewriters

SUBJECT: Escapement – New Adjustment Procedure

PURPOSE: Facilitate adjustments and provide an adjustment procedure to ensure the escapement rail and escapement torque bar are parallel.

SOLUTION: It is important when experiencing escapement problems that adjustments are made in the following sequence:

1. **Escapement Rack (single and dual pitch)** – With the print shaft rotated so the key way is down, adjust the left end of the escapement rail for .030" (0,76mm) between the platen gauge and the escapement rail.

   a. Loosen first three rail mounting screws from left end and adjust the left end with the platen gauge. (Fig. 1) After adjusting the left end, tighten the first rail mounting screw. It is important that this screw is tight to prevent loss of left-to-right position of the rail when adjusting the right end.

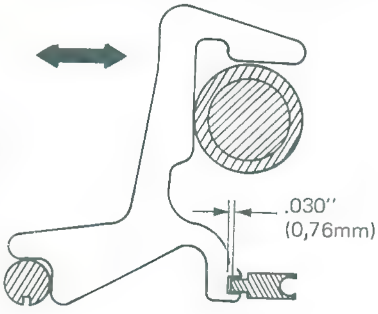
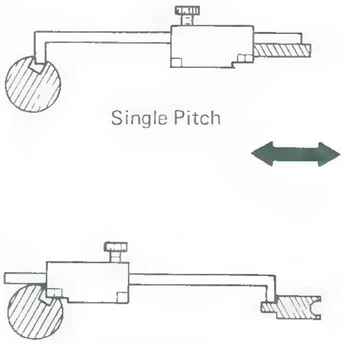


Figure 1

Right Side View

   CAUTION: Since the left end of the escapement rack is held stationary by the escapement rack bearing plate (07-20), adjusting the rail may cause a bow in the escapement rack or a bind in the sector gear and rack gear. If this occurs, loosen the two escapement rack bearing plate screws, relieve the bind and adjust the switch pitch sector gear.

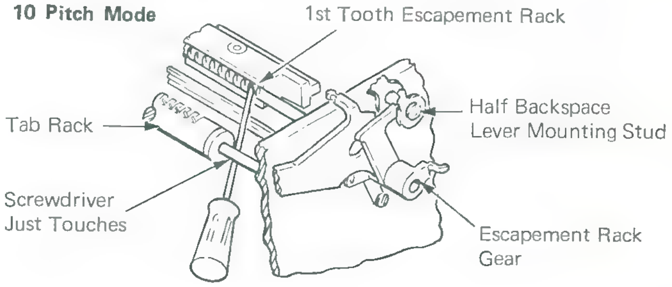
   b. Loosen the remaining screws on the right end. With the print shaft in the rest position, back the cycle shaft against the check pawl. Set the Hooverometer to just span the distance from the print shaft to the escapement rail on the left end (Fig. 2). Using the Hooverometer (fig. 2), adjust the center and tighten center screw. At this point, it may be necessary to flex the right end of the rail to match the left and center. Adjust the rail using the Hooverometer and tighten screws. This procedure will ensure the escapement rail is not bowed and is parallel to the print shaft.



Right Side View Figure 2

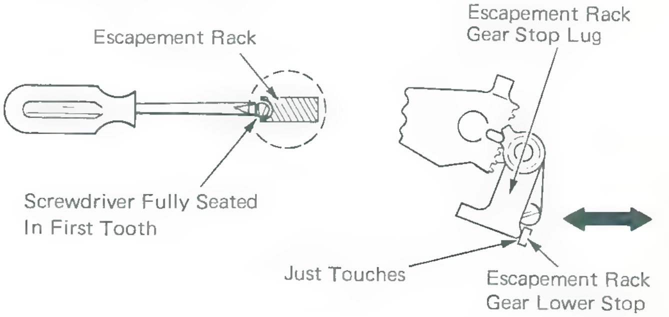
2. **Escapement Rack Gear (DP)** – With the escapement rack gear stop lug against the half-backspace lever mounting stud, adjust the 10 pitch escapement rack teeth vertical. This can be done as follows: Loosen the escapement rack gear. Insert the blade of a small three inch screwdriver in the first tooth on the left end of the rack. Raise the screwdriver until it touches the tab rack shaft and tap the screwdriver until it is fully seated in the tooth and the rack stops rotating; then, tighten the rack gear (Fig. 3). This procedure will ensure the rack teeth are vertical.

NOTE: The tip of the screwdriver blade must be square.



Rear View Figure 3

3. **Escapement Rack Gear Lower Stop (DP)** – Form the lower stop toward the front of the machine and insert the small three inch screwdriver in the first tooth of the escapement rack and tap the screwdriver until it is fully seated and the rack stops rotating. Form the lower stop until it touches the escapement rack gear stop lug. (Fig. 4)


Escapement Rack
Escapement Rack Gear Stop Lug
Screwdriver Fully Seated In First Tooth
Just Touches
Escapement Rack Gear Lower Stop

Left Side View Figure 4

4. **APM Frame 84** – Switch pitch sector gear (DP).
5. **APM Frame 85** – Escapement pawl guide lug (DP).
6. **APM Frame 86** – Carrier shoe (DP). This adjustment may be observed by applying grease on the escapement rail approx. 2 inches from the right end. Type or spacebar to track the escapement pawl through the grease. Carrier return and sight down the rack from the right end and observe the track left by the escapement pawl in the grease. The track should be centered in the rack.
   Note: The front carrier support adjustment must be checked before making this adjustment.
7. **APM Frame 88** – Escapement bracket.
8. Move the torque bar stop (06-39) and backup screws away from the torque bar. Move the trigger upstop out of the way and disconnect the spacebar link (17-307) (dual pitch only). Disconnect the escapement link.

Note: Adjustments 9 through 11 are preliminary adjustments.

9. With the carrier at the left, turn the torque bar stop screw (06-55) in so the torque bar just touches the pawl tail (Fig. 5).

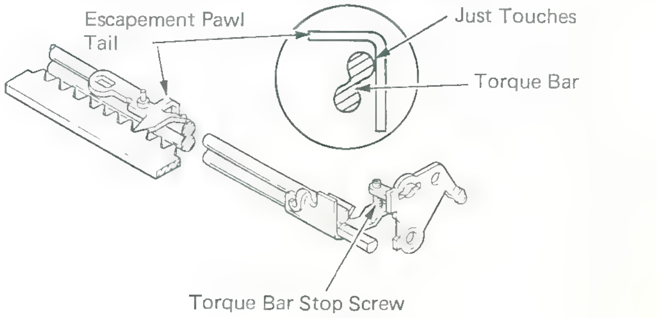


Figure 5

© IBM Corp. 1977

10. With the carrier at the right, adjust the tilt pulley bracket (23-50) so that the torque bar touches the pawl tail (Fig. 6). Adjust as follows: (A) If the tilt pulley bracket does not have the dowel pin, (23-54) adjust the bracket front-to-rear so the torque bar touches the escapement pawl tail (Fig. 6A). Adjust the bracket top-to-bottom so that the pawl tail overlaps the escapement torque bar on the right side the same as the left side (Fig. 6b). (B) If the tilt pulley bracket is pinned, it is possible to drive the pin in and adjust as in step 10A.

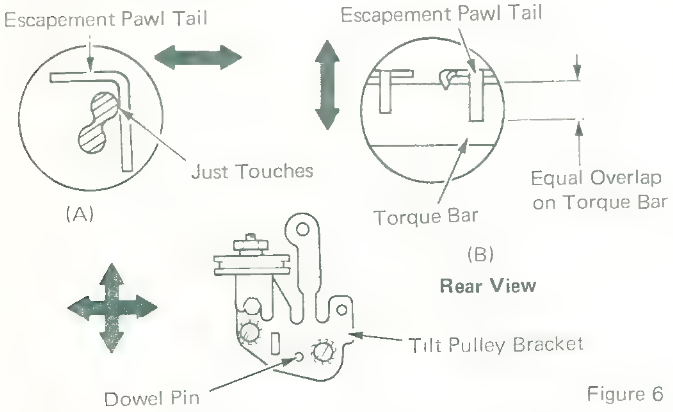


Figure 6

11. Move the carrier to the center and adjust the center backup screw so that the escapement torque bar touches the escapement pawl tail (Fig. 7).

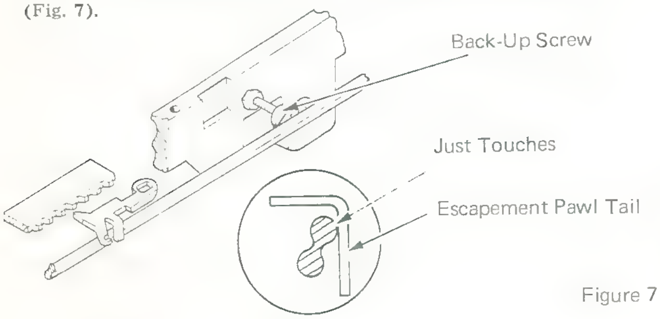


Figure 7

12. Move the carrier to the left, center and right. Ensure the escapement torque bar is just touching the escapement pawl tail the entire length of the rail. When this condition is met, back the torque bar stop screw out one full turn (Fig. 8). This will obtain .008"-.010" (0,20-0,25mm) clearance between the torque bar and the pawl tail.

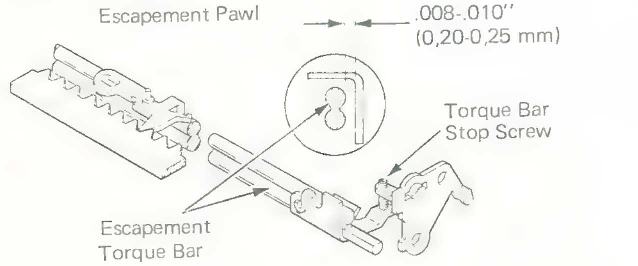


Figure 8

13. Adjust the left torque bar backup screw (06-13) (07-13) to just touch the escapement torque bar.
14. With the carrier at left, check the clearance between the tab torque bar and escapement bracket. Move the carrier to the right and form the tilt pulley bracket lug so the clearance at the closest point between the tab torque bar and escapement bracket matches left side (Fig. 9).

NOTE: The carrier return latch keeper (03-575) must be removed to make this adjustment.

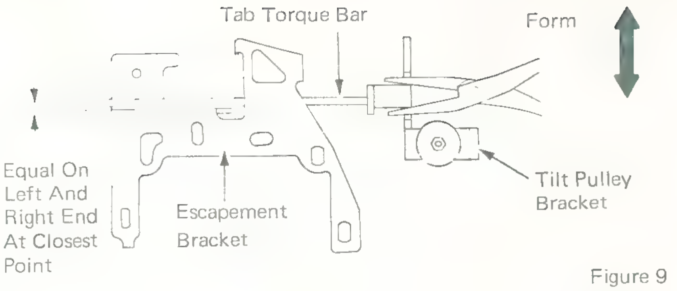


Figure 9

15. Reconnect escapement link and S/B link.
16. **APM Frame 93** — Torque bar backstop.
17. **APM Frame 95** — Escapement cam.
18. **APM Frame 96** — Escapement trip link.
19. **APM Frame 97** — Trigger knock-off.
20. **APM Frame 98** — Trigger upstop.
21. **APM Frame 122** — Spacebar link (DP).
22. The following method may be used to ensure the escapement rail, print shaft and escapement torque bar are parallel. With the machine on, pull the escapement trigger down until the escapement pawl just clears the rack. While holding the carrier with the left hand, move the carrier left and right the full length of the writing line several times listening to the pawl drag on the tips of the escapement rack. A great difference in sound between the left, center, and right ends means that the torque bar and escapement rail are not parallel. Check that the escapement rail is parallel and the escapement pawl tail clears the escapement torque bar by .008"-.010" (0,20-0,25mm) across the writing line. Refine the necessary adjustments to get this condition.
23. When all adjustments are correct, the carrier should not hang up or skip when slight pressure is put on the left side of the carrier during a repeat spacebar or repeat underscore operation.

NOTE: Refer to "Selectric" APM (F/N 241-5939-0) for illustrations of early level machines.

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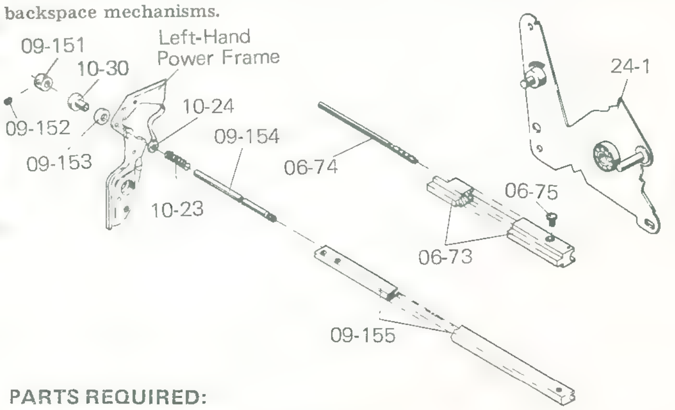
335 **SERVICE INFORMATION** 2-23 77

Model(s): SE II Single Pitch (Revised) 12-28-77

SUBJECT: Single Pitch — Rotary Backspace — New

The single pitch "Selectric" II Typewriter is now manufactured with rotary backspace. Backplate assembly no. 1290723 (9 pitch) and 1290899 (12 pitch) will be obsoleted. A universal (9, 10 & 12 pitch) backplate asm. will be used on all single pitch machines. All adjustments to the margin tab and rotary backspace are the same as for dual pitch. Rotary backspace should be adjusted to the level 2 specifications in the Adjustment/Parts Manual. The parts not pictured in Figure 1 can be found in the dual pitch margin, escapement and backspace mechanisms.



PARTS REQUIRED:

MECH/REF		PART NO.	DESCRIPTION	PRICE
06	75	1290567	Screw, Rail	.02
	73	1290884	Rail, Esc. 8X3	1.05
	73	1290885	Rail, Esc. 8X5	1.20
	74	1290886	Rack, Esc. 10P, 8X3	5.30
	74	1290887	Rack, Esc. 12P, 8X3	5.30
	74	1290888	Rack, Esc. 10P, 8X5	4.90
	74	1290889	Rack, Esc. 12P, 8X5	4.90
09	151	1290897	Collar Margin Rack	1.50
	152	1164096	Screw Collar	.10
	153	1175211	Washer Margin Rack	.01
	154	1290902	Rack Margin, 10P, 8X3	*
	154	1290903	Rack Margin, 12P, 8X3	*
	154	1290904	Rack Margin, 10P, 8X5	9.85
	154	1290905	Rack Margin, 12P, 8X5	9.85
	155	1204317	Rail Margin, 8X3	3.65
	155	1204318	Rail Margin, 8X5	3.95
24	01	1290898	Backplate Asm. (9, 10, 12 pitch)	*

MACHINES AFFECTED: 8X3 above approx. S/N 1761000 and 8X5 above approx. S/N 3324000.

COMBINED SERVICE INFORMATION
7XX, 8XX

This publication replaces the "Safety And Services Information" booklet, F/N 241-5516-4, dated June 1975. Included in this publication is all current service information from the "Safety And Service Information" booklet and service information from CEMs through CEM 334.

This publication is to be used with the "Technical Information Index" (TII) printed in the "Selectric" Part Number/Price List. The TII will indicate the page and item number of each piece of information printed in this booklet. Following is a step-by-step explanation of the features of the TII and the "Combined Services Information" (CSI) and their use.

TII Sample

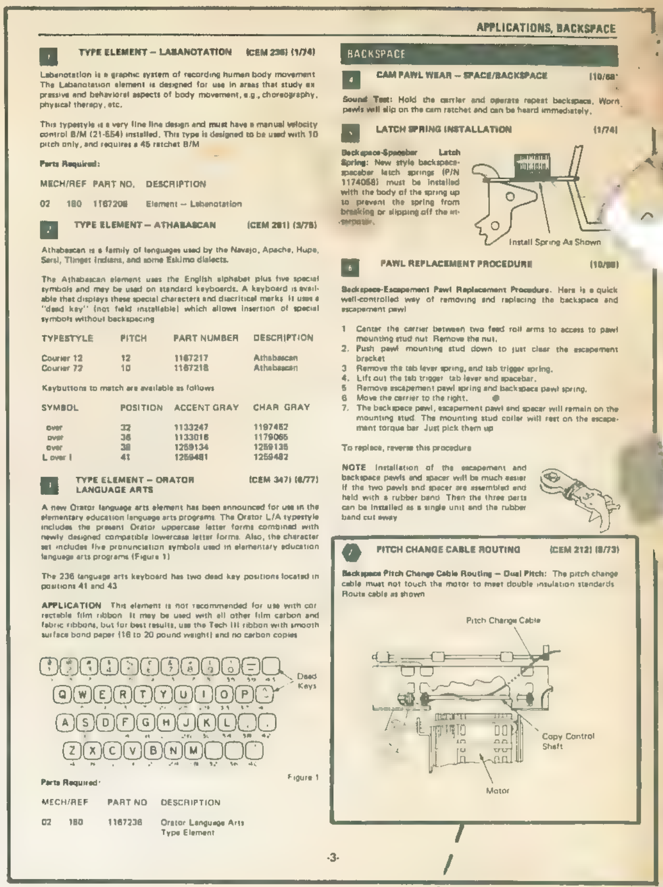
CEM: Original CEM number of the printed information. If this column is blank, the original CEM number is not available.

CEM	Current Pub.	Subject	CSI Page/Item
		BACKSPACE (CONT.)	
341	*CEM*	*Interlock Shaft–Redesigned*	
	CSI	*Latch Spring Installation*	*3-5*
91	*APM*	*Nine Pitch 7X1–Parts*	
321	*CEM*	*Nine Pitch 8X3–Parts*	
	CSI	*Pawl Replacement Procedure*	*3-6*
212	*CSI*	*Pitch Change Cable Routing*	*3-7*
185	*CSI*	*Rotary Backspace Bellcrank Stud*	*4-1*
311	*CSI*	*Rotary Backspace Drum–Removal Tip*	*4-3*
293	*CSI*	*Rotary Backspace Drum Wear*	*4-2*
140	*APM*	*Rotary Backspace–Spring Tension*	

CURRENT PUB.: The location of the current information. If "CSI" is in this column then the far right column labeled "CSI page/item" will indicate the page number and item number of this information in this publication (CSI). If "CEM" is in this column, the information is in a current CEM and the CEM column indicates the current CEM number. If "APM" is in this column, the information is in the parts section or the adjustment section of the Adjustment Parts Manual.

(See Page And Item Samples For Explanation)

Page Sample



APPLICATIONS, BACKSPACE

1 **TYPE ELEMENT – LABANOTATION** (CEM 236) (1/74)

Labanotation is a graphic system of recording human body movement. The Labanotation element is designed for use in areas that study expressive and behavioral aspects of body movement, e.g., choreography, physical therapy, etc.

This typestyle is a very fine line design and must have a manual velocity control B/M (21-554) installed. This type is designed to be used with 10 pitch only, and requires a 45 ratchet B/M

Parts Required:

MECH/REF		PART NO.	DESCRIPTION
02	180	1167208	Element – Labanotation

2 **TYPE ELEMENT – ATHABASCAN** (CEM 281) (3/75)

Athabascan is a family of languages used by the Navajo, Apache, Hupa, Sarsi, Tlingit Indians, and some Eskimo dialects.

The Athabascan element uses the English alphabet plus five special symbols and may be used on standard keyboards. A keyboard is available that displays these special characters and diacritical marks. It uses a "dead key" (not field installable) which allows insertion of special symbols without backspacing

TYPESTYLE	PITCH	PART NUMBER	DESCRIPTION
Courier 12	12	1167217	Athabascan
Courier 72	10	1167218	Athabascan

Keybuttons to match are available as follows

SYMBOL	POSITION	ACCENT GRAY	CHAR GRAY
over	32	1133247	1197452
over	36	1133016	1179065
over	38	1259134	1259135
L over l	41	1259481	1259482

3 **TYPE ELEMENT – ORATOR LANGUAGE ARTS** (CEM 347) (6/77)

A new Orator language arts element has been announced for use in the elementary education language arts programs. The Orator L/A typestyle includes the present Orator uppercase letter forms combined with newly designed compatible lowercase letter forms. Also, the character set includes five pronunciation symbols used in elementary education language arts programs (Figure 1)

The 236 language arts keyboard has two dead key positions located in positions 41 and 43

APPLICATION This element is not recommended for use with correctable film ribbon. It may be used with all other film carbon and fabric ribbons, but for best results, use the Tech III ribbon with smooth surface bond paper (16 to 20 pound weight) and no carbon copies

Dead Keys

Figure 1

Parts Required:

MECH/REF		PART NO	DESCRIPTION
02	180	1167236	Orator Language Arts Type Element

BACKSPACE

4 **CAM PAWL WEAR – SPACE/BACKSPACE** (10/68)

Sound Test: Hold the carrier and operate repeat backspace. Worn pawls will slip on the cam ratchet and can be heard immediately.

5 **LATCH SPRING INSTALLATION** (1/74)

Backspace-Spacebar Latch Spring: New style backspace-spacebar latch springs (P/N 1174058) must be installed with the body of the spring up to prevent the spring from breaking or slipping off the interposer.

Install Spring As Shown

6 **PAWL REPLACEMENT PROCEDURE** (10/68)

Backspace-Escapement Pawl Replacement Procedure. Here is a quick well-controlled way of removing and replacing the backspace and escapement pawl

1. Center the carrier between two feed roll arms to access to pawl mounting stud nut. Remove the nut.
2. Push pawl mounting stud down to just clear the escapement bracket
3. Remove the tab lever spring, and tab trigger spring.
4. Lift out the tab trigger tab lever and spacebar.
5. Remove escapement pawl spring and backspace pawl spring.
6. Move the carrier to the right.
7. The backspace pawl, escapement pawl and spacer will remain on the mounting stud. The mounting stud collar will rest on the escapement torque bar. Just pick them up

To replace, reverse this procedure

NOTE Installation of the escapement and backspace pawls and spacer will be much easier if the two pawls and spacer are assembled and held with a rubber band. Then the three parts can be installed as a single unit and the rubber band cut away

7 **PITCH CHANGE CABLE ROUTING** (CEM 212) (8/73)

Backspace Pitch Change Cable Routing – Dual Pitch: The pitch change cable must not touch the motor to meet double insulation standards. Route cable as shown

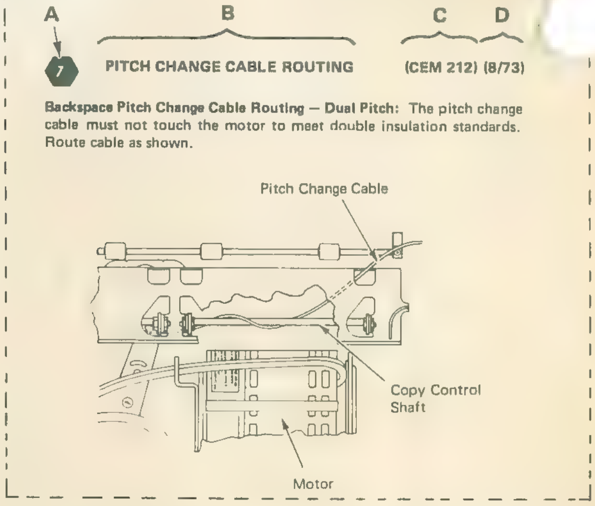
Pitch Change Cable

Copy Control Shaft

Motor

-3-

Item Sample



7 **PITCH CHANGE CABLE ROUTING** (CEM 212) (8/73)

Backspace Pitch Change Cable Routing – Dual Pitch: The pitch change cable must not touch the motor to meet double insulation standards. Route cable as shown.

A. **Item Number:** This number corresponds to the number shown in the TII and is used to locate the information. The number will appear in a CEM category symbol to indicate the type information contained. (See General Section, "CEM" Category Symbol – Explanation.") On reliability items, an expiration date will be shown. This number will start with "1" on each new page.

B. **Subject.**

C. **CEM Number.** If the information was originally published in a CEM, the number(s) of the CEM(s) will appear in parentheses in this area. If this area is blank, the information was printed in a publication other than a CEM.

D. **Date Published.** This date is the date the information was sent to the field.

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RIGHT$(X$,X)

This will return the rightmost X characters in X$.

STR$(X)

This will contain a string which is identical to the PRINTed version of X$.

VAL(X$)

This function converts the string X$ into a number, and is essentially the inverse operation from STR$. The string is examined from the left-most character to the right, for as many characters as are in recognizable number format. If the VIC finds illegal characters, only the portion of the string up to that point is converted.

EXAMPLE:

```
10 X=VAL("123.456")        X=123.456
10 X=VAL(" 12A13B")        X=12
10 X=VAL("RIUO17*")        X=0
10 X=VAL(" -1.23.23.23")   X=-1.23
```

c. OTHER FUNCTIONS

FRE(X)

This function returns the number of unused bytes available in memory, regardless of the value of X.

POS(X)

This function returns the number of the column (0-21) at which the next PRINT statement will begin on the screen. X may have any value, and is not used.

SPC(X)

This is used in the PRINT statement to skip X spaces forward.

TAB(X)

This is used in the PRINT statement. The next item to be printed will be in column number X.

APPENDIX D: ABBREVIATIONS FOR BASIC KEYWORDS

As a time saver when typing in programs and commands, VIC BASIC allows the user to abbreviate most keywords. The abbreviation for the word PRINT is a question mark. The abbreviations for the other words are made by typing the first one or two letters of the key word, followed by the SHIFTed next letter of the word. If the abbreviations are used in a program line, the keyword will LIST in the longer form. Note that some of the keywords when abbreviated include the first parenthesis, and others do not.

Command	Abbreviation	Looks like this on screen	Command	Abbreviation	Looks like this on screen
AND	A SHIFT N	A ╱	PRINT#	P SHIFT R	P ▁
NOT	N SHIFT O	N □	READ	R SHIFT E	R ▔
CLOSE	CL SHIFT O	CL □	RESTORE	RE SHIFT S	RE ♥
CLR	C SHIFT L	C □	RETURN	RE SHIFT T	RE ▏
CMD	C SHIFT M	C ╲	RUN	R SHIFT U	R ╭
CONT	C SHIFT O	C □	SAVE	S SHIFT A	S ♠
DATA	D SHIFT A	D ♠	STEP	ST SHIFT E	ST ▔
DEF	D SHIFT E	D ▔	STOP	S SHIFT T	S ▏
DIM	D SHIFT I	D ╮	SYS	S SHIFT Y	S ▕
END	E SHIFT N	E ╱	THEN	T SHIFT H	T ▕
FOR	F SHIFT O	F □	VERIFY	V SHIFT E	V □
GET	G SHIFT E	G ▔	WAIT	W SHIFT A	W ♠
GOSUB	GO SHIFT S	GO ♥	ABS	A SHIFT B	A ▏
GOTO	G SHIFT O	G □	ASC	A SHIFT S	A ♥
INPUT#	I SHIFT N	I ╱	ATN	A SHIFT T	A ▏
LET	L SHIFT E	L ▔	CHR$	C SHIFT H	C ▕
LIST	L SHIFT I	L ╮	EXP	E SHIFT X	E ♣
LOAD	L SHIFT O	L □	FRE	F SHIFT R	F ▁
NEXT	N SHIFT E	N ▔	LEFT$	LE SHIFT F	LE ▁
OPEN	O SHIFT P	O □	MID$	M SHIFT I	M ╮
POKE	P SHIFT O	P □	PEEK	P SHIFT E	P ▔
PRINT	?	?	RIGHT$	R SHIFT I	R ╮

IBM Office Products Division **Customer Engineering Memorandum**

"SELECTRIC" TYPEWRITER

The information contained in the CEM's that have not been republished (i.e. — missing CEM's in the numerical sequence) is in the latest "Selectric" Typewriter Parts Catalog, or Pictorial Reference/Adjustment Manual

1 SERVICE INFORMATION

Mech. Code 722

12-27-68 (Revised) 7-1-70

SUBJECT: Print Shield — Removable

PURPOSE: To eliminate sideprinting or interference printing on the original. (For carbon ribbon machines.)

SOLUTION: Use this B/M after ensuring that maladjustments are not causing the side printing condition.

SHIELD LIFE: Interference printing may re-appear when the shield becomes worn. The life of the shield will vary with the application but will last approximately 30 ribbons. (The shield should be inspected on any service call and replaced if necessary to minimize the number of times an operator has to replace the card holder and shield assembly.)

ADJUSTMENTS:

1. Adjust for normal .010" to .015" cardholder-to-platen clearance.
2. Adjust cardholder left or right and up or down for proper registration. A common cardholder for both the 10 and 12 pitch machines is used. This means that there will be 5 spaces between the registration marks for 10 pitch machine and 6 spaces for a 12 pitch machine.
3. On old-style film ribbon mechanisms, adjust the load lever link so the shield is against the platen when the ribbon is being installed.
4. Check for possible interferences with the ribbon lift mechanism. **NOTE:** When the cardholder is adjusted for proper registration, the shield will be in the correct position.
5. Type an upper case "T", backspace and type an underscore. The "T" should be in the center and the underscore approximately .020" from the bottom of the hole. (Fig. 1)
6. The shield actuating lever must be towards the front during normal typing operation and the shield must rest against the element. Crease the shield at the bottom if necessary to obtain this condition.

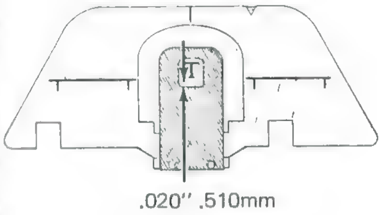


Fig. 1

OPERATOR INSTRUCTIONS

Instruct the operator to push the gray positioning lever to the rear before installing an element. This will prevent the shield from becoming trapped under the element. During typing the lever must be towards the keyboard.

When the load lever of the film ribbon mechanism is activated, the shield will automatically be positioned to the rear. The ribbon must be installed in front of the shield.

Demonstrate to the operator the removal and installation of the cardholder. (Have the operator try it.)

Leave the 4 additional cardholders with the operator.

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION
164	1175842	B/M Removable Print Shield

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

TYPE CHANGE: Product Feature ● Use Applicable Service Code.

PARTS INFORMATION: Order Lexington. Regular or emergency. All parts in B/M are shown in current Parts Catalog.

40 ENGINEERING CHANGE

Mech. Code 712

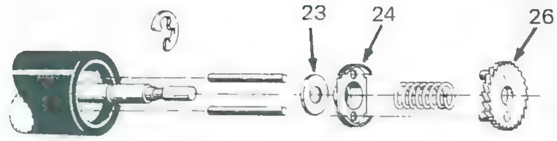
12-10-69 (Revised) 7-1-70

SUBJECT: Platen Ratchet & Driver Redesigned

ADJUSTMENTS: Remain the same.

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
23	1147198	Washer, Thrust	.03
24	1164476	Driver	1.35
26	1164462	Ratchet, 24T	2.40
26	1164463	Ratchet, 27T	2.40
26	1159549	Ratchet, 36T	2.40
26	1175276	Ratchet, 45T	2.40
26	1175283	Ratchet, 48T	2.40
26	1164464	Ratchet, 54T	2.40



NOTE: Ratchets and drivers are not interchangeable with former-levels. Order the three appropriate parts above when replacement of driver or ratchet is required on earlier levels.

MACHINES AFFECTED: Above approximate S/N 7X1/5814792, 7X3/5296092 and 7X5/5649208 have this change plant installed.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

TYPE OF CHANGE: Manufacturing Improvement ● CODE: Use Applicable Service Code

STOCK DISPOSITION: Scrap existing stock of P/N's 1164462, 1164463, 1164464, 1164476, 1175276, 1175283 and 1159549, on a Debit Memo, charging OP HQ Acct. Code 14-090-0232 and noting this CEM as authorization.

41 SERVICE INFORMATION

Mech. Code 702

12-10-69 (Revised) 7-1-70

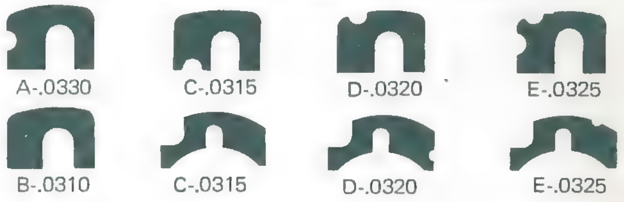
CARRIER

Tilt Ring Spacer Shims: Shims have been redesigned to provide more support to spacer. They are also easier to handle and identify.

PARTS REQUIRED:

PART NO.	DESCRIPTION	PRICE
1123822	Shim A	.05
1123823	Shim B	.05
1123824	Shim C	.05
1123825	Shim D	.05
1128281	Shim E	.03

NOTE: Shims A and B were not redesigned due to their low usage.



42 ENGINEERING CHANGE

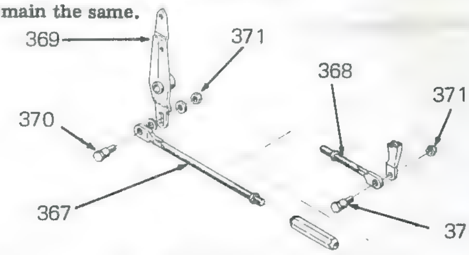
Mech. Code 723

12-10-69 (Revised) 7-1-70

SUBJECT: Rotate Arm, Studs And Links Redesigned

PURPOSE: To eliminate flats from rotate arm stud.

ADJUSTMENTS: Remain the same.



PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
367	1147183	Link, Long, 7X3	.25
367	1147184	Link, Long, 7X1	.25
367	1147185	Link, Long, 7X5	.25
368	1147182	Link, Short, All Models	.20
369	1147195	Rotate Arm	.15
370	1147194	Stud	.15
371	38051	Nut	.03

MACHINES AFFECTED: Above S/N 7X1-5813240, 7X3-5292582 and 7X5-5646458 have this change plant installed.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

TYPE CHANGE: Mfg. Improvement ● Use Applicable Service Code.

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45 ENGINEERING CHANGE

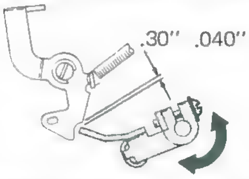
Mech. Code 703

1-28-70
(Revised) 7-1-70

SUBJECT: Carrier Return Mechanism 7X3 - 7X5 Redesigned

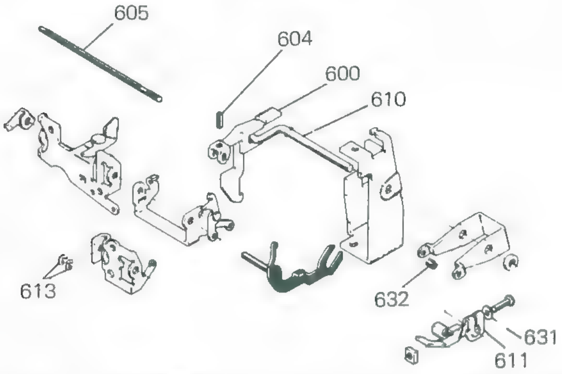
PURPOSE: Eliminate parts — simplify mechanism.

ADJUSTMENTS: With the carrier return cam on the high point, rotate the clutch latch to obtain .030" to 40" clearance between the clutch latch and clutch latch keeper (clutch latch overthrow). Other adjustments remain the same.



PARTS REQUIRED:

REF.	PART NO.	QTY.	DESCRIPTION	PRICE
600	1147181	1	Arm, CR Latch	.55
605	1147197	1	Pin, LH Pivot	.35
610	1147156	1	Shaft, Clutch Latch Actuating 7X3	.35
610	1147157	1	Shaft, Clutch Latch Actuating 7X5	.35
611	1147153	1	Latch, CR Clutch	.35
613	1073418	2	Retainer	.01
631	1091220	1	Washer, CR Clutch Latch	.01
632	1147155	1	Clip, CR Shaft	



MACHINES AFFECTED: Machines above approximate S/N 7X3-5294670 and 7X5-5646400 have this change.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

TYPE OF CHANGE: Manufacturing Improvement ● Use Applicable Service Code.

PARTS INFORMATION: Retain present-level parts for Field use.

47 ENGINEERING CHANGE

Mech. Code 708

1-28-70
(Revised) 7-1-70

SUBJECT: Keyboard Mounting Screw-New

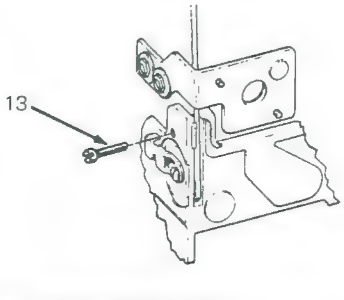
PURPOSE: Better keyboard mounting.

SYMPTOM: Loose keyboards; causing extra cycles or failure to fire cycle clutch.

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
13	1147323	Screw, Round-Slotted Head, Self-Tap	.04

MACHINES AFFECTED: This screw can be used on any 7X3 or 7X5 machine. On early machines the outboard hole is the same size as the inboard hole and the screw head cannot and should not be drawn up to the power frame or breakage of the screw or frame will result. (Be careful to align keyboard and power frame holes.) Later machines have a larger outboard hole. Use of hex-head screw, P/N 1138975, (N/L 185) must be discontinued.



THE FOLLOWING INFORMATION FOR IBM USE ONLY

TYPE CHANGE: Reliability ● CODE: 32 only when a screw must be used to replace a roll pin. ● EXPIRES: 12/31/70

48 SERVICE INFORMATION

5-6-70
(Revised) 7-1-70

PLATEN AND ESCAPEMENT

Platen And Escapement Rack Gage For IBM "Selectric" Typewriter P/N 9900519: The gage is designed to aid the Customer Engineer in solving print problems by providing accurate front-to-rear adjustment of the platen and a nominal height adjustment of the platen.

The gage is also designed to provide accurate positioning of the escapement rack when adjustment is necessary due to replacement or other reasons.

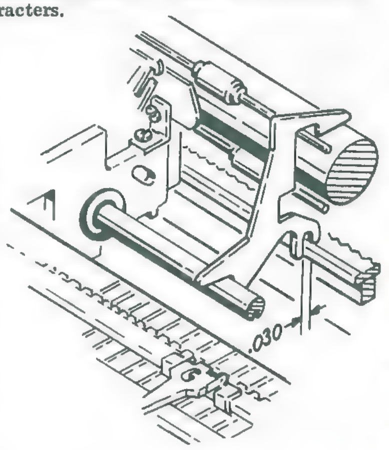
INSTRUCTIONS FOR USE:

Platen Positioning:

1. Rotate the print shaft so that the key way is down.
2. With the copy control lever forward, loosen the platen eccentrics and move the platen to the extreme rear and as low as possible.
3. Rest the gage on the print shaft and escapement rack at one extreme end of the machine as shown in the illustration.
4. Adjust the platen front-to-rear and platen height. Be certain that the gage maintains proper contact with the print shaft and the escapement rack.
5. Move the gage to the other end of the machine and repeat the procedure in Item 4. Check for a parallel condition by sliding the gage back to the beginning end.
6. The platen height should now be adjusted to provide even top and bottom color of printed characters.

ESCAPEMENT RACK POSITION:

1. Remove the platen from the machine
2. Rotate the print shaft so that the key way is down.
3. Rest the gage on the print shaft and the escapement rack at one end of the machine as shown in the illustration.
4. The correct position for the escapement rack is the distance spanned by the gage plus .030". (This clearance is provided to allow easy maneuvering of the tool.) adjust the escapement rack to this dimension and parallel to the print shaft.



49 ENGINEERING CHANGE

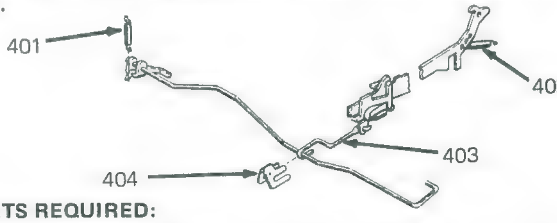
Mech. Code 717

5-20-70
(Revised) 7-1-70

SUBJECT: Space To Print Interlock Redesign

PURPOSE: More reliable, Field installable interlock.

ADJUSTMENTS: Adjustments and installation instructions included in B/M.



PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
400	1268639	B/M, Space To Print Interlock	.30
401	1159132	Spring, Interlock	.05
402	1174483	Spring, S/B Interposer	.05
403	1174484	Link, Interlock	.15
404	1174490	Retainer	.05

MACHINES AFFECTED: B/M P/N 1268639 can be installed only on machines having new-style interposer with lug extension beneath latch and a new-style interrupter bail with the additional offset for this interlock. For earlier machines, order B/M Mech. 717, Ref. 370.

Model	721 above S/N 5825769
	723 above S/N 5328368
	725 above S/N 5674254

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

TYPE OF CHANGE: Reliability ● Use Applicable Service Code.

50 ENGINEERING CHANGE

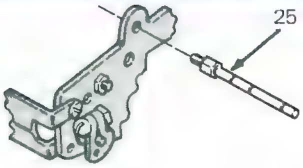
Mech. Code 708

5-20-70
(Revised) 7-1-70

SUBJECT: On-Off Tab Keybutton Mounting Stud Replaceable

SOLUTION: Tap the hole in the keyboard side frame using a 8-32 tap and install the new stud.

CEM NO. 50 (Cont'd.)



PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
25	1203582	Stud, Replacement 8-32 Thread	.45

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Serviceability ● Use Applicable Service Code.

51 ENGINEERING CHANGE

Mech. Code 749 — 7-1-70

SUBJECT: Paper Bail Rolls — Larger Diameter For Machines With Pinfeed Platens

PURPOSE: To allow the paper bail rollers to contact the platen when the paper bail is resting against the pinwheel cam control plates.

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
28	1147282	Bail Roll	.35

MACHINES AFFECTED: "Selectric" Typewriters equipped with pinfeed platens.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Reliability ● Use Applicable Service Code.

PARTS INFORMATION: Order Lexington.

52 SAFETY

Mech. Code 711 — 7-15-70 (Revised) 7-29-70

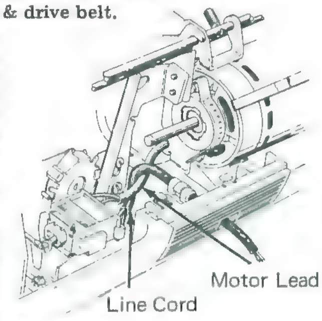
SUBJECT: Linecord, Switch & Motor Leads—Routing

SAFETY LOCATION: Motor clutch & drive belt.

SAFETY PRECAUTIONS: When replacing linecord, switch or motor, be careful to route the linecord over the top and around the motor lead insulating tube. This is necessary to prevent the insulating tube from coming in contact with the motor clutch or drive belt.

MACHINES AFFECTED: All "Selectric" Typewriters.

NOTE: Some reconditioned machines were released to the Field with incorrect routing of the leads. All recon machines should be checked for this condition on the next call.



THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Safety ● Use Applicable Service Code.

53 ENGINEERING CHANGE

Mech. Code 721 — 7-15-70 (Revised) 7-29-70

SUBJECT: Low Velocity Cam Follower — Replacement Stud

PURPOSE: Field replacement stud for low velocity cam follower when "Pressed-In" stud becomes loose or broken.

SOLUTION: Use 5-40 tap in sideframe and install replacement stud.

NOTE: Use of this stud on the I/O may require modification of the low velocity latch.

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
417	1275413	Stud B/M, 5-40	.60

MACHINES AFFECTED: Install on any machine with described condition.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

ESTIMATED INSTALLATION TIME: .5 hours.

CHANGE TYPE: Serviceability ● Use Applicable Service Code

PARTS INFORMATION: Order Lexington.

54 ENGINEERING CHANGE

Mech. Code 703 — 7-29-70

SUBJECT: Torque Limiter Hub Insert — Return To Former-Level

PURPOSE: Quieter Operation

SOLUTION: On machines with loud idling noise, replace steel insert with former level PVC insert.

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
315	1123579	Insert	.10

MACHINES AFFECTED: 7X1-4278323-5832324, 7X3-4962863-5358969, 7X5-4600422-5705590.

NOTE: Machines above 7X1-5832324, 7X3-5358969, 7X5-5705590 have PVC insert installed.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Manufacturing ● CODE: 32 ● EXPIRES: 12/1/70.

PARTS INFORMATION: Order Lexington. Retain present stock for use on other products.

55 SERVICE INFORMATION

Mech. Code 712 — 7-29-70

PLATENS

Platens For Field Use: To avoid stocking excess quantities of "Selectric" platens, only 27-tooth platens will be available to the Field. The part numbers are:

7X1-1269332
7X3-1269336
7X5-1269340

When a platen other than 27-tooth is needed, the appropriate ratchet must also be ordered. Early-level platen ratchets are not compatible with current-level platens and should not be interchanged.

NOTE: When replacing a 27-tooth platen or ratchet on machines below: 7X1-5768900, 7X3-5183121, 7X5-5536090, also replace the index pawl assembly, P/N 1128018, identified by the letter "N" stamped on its side.

56 ENGINEERING CHANGE

Mech. Code 711 — 7-29-70

SUBJECT: Motor Clutch Pawl Springs

SYMPTOM: Noisy motor pawls.

SOLUTION: Replace present spring with new motor clutch pawl spring.

ADJUSTMENTS: Remain the same.

PARTS REQUIRED

REF.	PART NO.	DESCRIPTION	PRICE
045	1147333	Spring, 60Hz	.05

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

ESTIMATED INSTALLATION TIME: 0.1 hours.

CHANGE TYPE: Reliability ● CODE 32 ● EXPIRES: 12/1/70

PARTS INFORMATION: Order Lexington.

57 ENGINEERING CHANGE

Mech. Code 701 — 7-29-70

SUBJECT: Backspace Rack And Mounting Studs 7X5 — Redesigned

PURPOSE: Improve backspace reliability.

SYMPTOM: Backspace rack mounting stud shoulder tries to seat in hole in spacer causing rack to bind.

SOLUTION: Backspace rack mounting stud shoulder increased .030 inch in diameter and rack slots increased .030 inch in width. The new level stud can be identified by its dull gray color. Backspace racks replaced on earlier level machines with silver color studs must have new level studs installed also.

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
303	1147335	Stud	.05

Backspace rack P/N's remain the same. Old-level stud will remain available for replacement purposes.

NOTE: All 7X5 above S/N 5725435 have this change. 7X1's and 7X3's will have this change at a later date.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Reliability ● Use Applicable Service Code

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CEM No. 57 (Cont'd)

PARTS INFORMATION: Scrap existing stock of P/N 1147320 and 1147319 and reorder using same P/N. Record scrap on a debit memo charging OP HQ Acct. No. 14-090-0232 and note this CEM as authorization.

58 SERVICE INFORMATION

Mech. Code 702

7-29-70

CARRIER AND ROCKER

Detent Actuating Lever Screw: Some recently manufactured "Selectric" Typewriters reached the Field with detent actuating lever screws, Mech. 702, Ref. 525 that are too small in diameter and will come loose or pull out causing loss of skirt clearance. If this occurs, the screw, P/N 1128495 must be replaced. S/N range:

7X1 5836585 — 5840205
7X3 5370183 — 5373261
7X5 5717773 — 5721371

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CODE: 12 during warranty CODE: 32 after warranty. CODE 32 expires 12-31-70.

59 ENGINEERING CHANGE

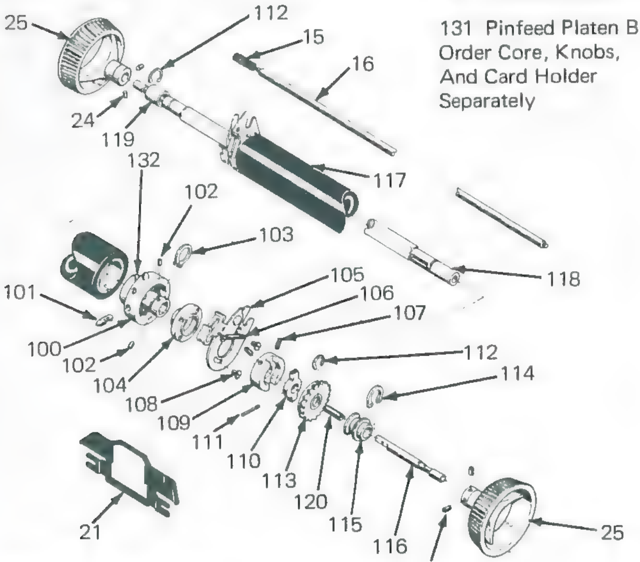
Mech. Code 749

7-29-70
(Revised) 8-7-70

SUBJECT: Pinfeed Platen — Redesigned

PURPOSE: Larger Pins (.140" diameter)

ADJUSTMENTS: Pinwheels are set screwed to shaft to hold platen core in position.



130 Pinwheel Asm.

131 Pinfeed Platen B/M Order Core, Knobs, And Card Holder Separately

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
15	1128529	Spring	.05
16	1174188	Rod, 7X1	1.15
16	1141954	Rod, 7X3	1.45
16	1174190	Rod, 7X5	1.75
21	1128532	Card Holder 10P	1.55
21	1135780	Card Holder 12P	1.55
24	1100523	Screw	.04
25	1164727	Platen Knob, Accent Gray	1.00
25	1123584	Platen Knob, Charcoal Gray	1.00
25	1164728	Platen Knob, Blue	1.00
25	1138457	Platen Knob Navy	1.00
100	1203784	Pinwheel Body	10.85
101	1203783	Pin, .140"	.65
102	257957	Screw	.10
103	2155979	Retainer	.10
104	1203787	Cam	2.65
105	1203786	Cam Control Plate, RH	.80
105	1203788	Cam Control Plate, LH	.80
106	1203785	Spring	.10
107	1175106	Screw	.10
108	1127785	Screw	.05
109	1203742	Guide, Platen Variable	7.00
110	1203745	Driver	4.00
111	1128526	Pin	.02
112	236571	Retainer	.04
113	1203737	Ratchet, 27T	2.40
113	1203738	Ratchet, 36T	2.40
113	1203739	Ratchet, 45T	2.40
113	1203740	Ratchet, 48T	2.40
113	1203741	Ratchet, 54T	2.40
114	311072	Retainer	.04
115	1203743	Bushing	1.00
116	1128525	Shaft, 7X1	1.45
116	1128525	Shaft, 7X3	1.45
116	1135337	Shaft, 7X5	1.50
Platen Cores	**Pin to Pin Dimensions**		
117	1203934	5 1/4"	5.00
117	1203935	6"	5.00
117	1203936	7 1/2"	5.00
117	1203937	8"	6.00
117	1203938	9"	6.00
117	1203939	9 3/8"	6.00
117	1203940	9 7/8"	6.00
117	1203941	10"	6.00
117	1203942	10 1/8"	6.00
117	1203943	11 1/4"	7.00
117	1203944	11 1/2"	7.00
117	1203945	12 1/2"	7.00
117	1203946	13 1/8"	7.00
118	1203780	Shaft, Platen 7X1	7.10
118	1174446	Shaft, Platen 7X3	9.10
118	1203744	Shaft, Platen 7X5	11.55
119	1203747	Bushing, LH	.25
120	1090568	Spring	.01
130	1203781	Pinwheel Asm. RH	22.00
130	1203782	Pinwheel Asm. LH	22.00
131	1275613	B/M, 7X1	65.45
131	1275432	B/M, 7X3	69.45
131	1275614	B/M, 7X5	74.45
132	437289	Roll pin	.03

MACHINES AFFECTED: Machines using forms with larger holes.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

ESTIMATED INSTALLATION TIME: .3 hrs.

CHANGE TYPE: Manufacturing ● Use Applicable Service Code.

PARTS INFORMATION: Order Lexington. Present pinfeed platens (.125" pins) remain available.

60 SERVICE INFORMATION

Mech. Code 703

7-29-70

CARRIER RETURN

Carrier Return Latch Overthrow: To ensure proper overthrow, install platen in machine when checking or making the carrier return latch overthrow adjustment.

61 ENGINEERING CHANGE

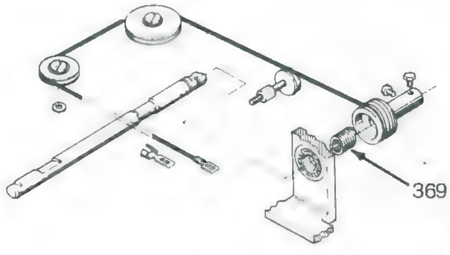
Mech. Code 703

7-29-70
(Revised) 8-7-70

SUBJECT: Escapement Shaft Compression Spring

PURPOSE: To more effectively control the escapement shaft end play when adjusting the escapement cord drum.

ADJUSTMENTS: Remain the same.



PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
369	1073299	Spring	.05

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Manufacturing ● Use Applicable Service Code

PARTS INFORMATION: Order Lexington.

62 ENGINEERING CHANGE

Mech. Code 704

8-7-70

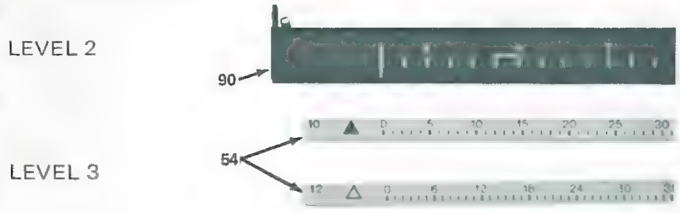
SUBJECT: Graphics On Paper Table And Margin Scales

PURPOSE: Universal erasing tables. Easier to read. Easier centering. Paper tables are graduated in inches, beginning at the center.

Margin scales have pitch identification at left end.

A filled triangle denotes 10 pitch; an open triangle, 12 pitch.

CEM No. 62 (Cont'd)



PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
54	1141572	7X1—10P Margin Scale	1.00
54	1141573	7X1—12P Margin Scale	1.00
54	1141574	7X3—10P Margin Scale	1.25
54	1141575	7X3—12P Margin Scale	1.25
54	1141576	7X5—10P Margin Scale	1.50
54	1141577	7X5—12P Margin Scale	1.50
90	1128261	7X1 Erasing Table	2.85
90	1128263	7X3 Erasing Table	3.25
90	1128265	7X5 Erasing Table	3.45

MACHINES AFFECTED: Machines above approximate S/N's 7X1-5819639, 7X3-5309281, and 7X5-5664741 have this change plant-installed. If new machines are received by a customer, some with old-style parts and others with new-style parts, the old-style machines may be converted to new-style at the customer's request, using Code 12. This applies to machines delivered within 90 days of each other only.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Manufacturing ● Use applicable service code.

PARTS INFORMATION: Order Lexington. Ref. 54—Level 1 parts remain available. Ref. 90—Scrap P/N's 1128262. 112826,, & 1128266. Scrap level 1 of 1128261, 1128263, & 1128265. Level 1 can be identified by graduations both in pitch and inches. Level 2 is graduated in inches only — DO NOT SCRAP.

63 ENGINEERING CHANGE

Mech. Code 706

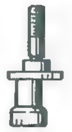
8-7-70

SUBJECT: Escapement Pawl Mounting Stud—Redesigned

PURPOSE: Provide material for backup for the cylindrical portion of the escapement torque bar.

ADJUSTMENTS: .001" to .004" clearance between stud and escapement torque bar.

NOTE: Observe this clearance at the lower portion of the stud where the material was added.



PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
26	1147403	Stud, Pawl Mtg.	.35

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Manufacturing ● Use Applicable Service Code.

PARTS INFORMATION: Order Lexington. Former level remains available for use on other products.

64 SERVICE INFORMATION

Mech. Code 716

8-26-70

SHIFT BEARING—FREEZING TO OPERATIONAL SHAFT

Previously published in ATB 162 (4-15-70)

Some machines manufactured in January, February and March reached the Field with defective shift bearings (bearing is mounted in retainer plate, Mech. 716, Ref. 31). These bearings can freeze to the operational shaft and rotate within their mounting. When this occurs, the operational shaft must be cleaned and the shift bearing plate (P/N 1174331) must be replaced. A possible preventive measure is to put a few drops of No. 10 oil on the LH end of this bearing during the next service call or inspection. Approximate serial number ranges:

7X1 5819551 — 5828080
7X3 5308886 — 5342869
7X5 5661062 — 5690723

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

For replacing bearing plate assembly use Service Code 12 during warranty. After the warranty period use Service Code 32 — expires 12-31-70. When reporting, use Mechanism Code 716, Reference 031, cause of failure code 02 or 18.

65 ENGINEERING CHANGE

Mech. Code 711

8-26-70

SUBJECT: Motor Mounts—Hard—Shaded Pole

Some machines were released with hard motor mounts. They can be identified by the absence of the metal ring around the mount and a flange on the side of the mount that rests against the motor.

SYMPTOM: Increased idling noise.

SOLUTION: Replace motor mounts.

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	QTY.	PRICE
41	1174096	Ring, R&M Motor	2	.50

MACHINES AFFECTED:

7X1-5837067-5839695
7X3-5369607-5372815
7X5-5722305-5725745

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

ESTIMATED INSTALLATION TIME: .2 hr.

CHANGE TYPE: Reliability ● CODE 32 expires 7-31-71.

66 ENGINEERING CHANGE

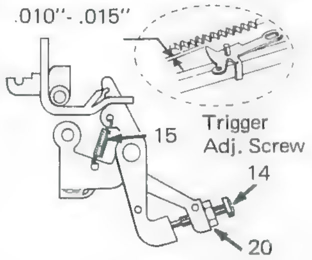
Mech. Code 706

9-23-70

SUBJECT: Escapement Trigger Assembly — Redesigned

PURPOSE: Simplify adjustment of trigger knock-off.

ADJUSTMENTS: Loosen locknut and adjust trigger knock-off adjusting screw so that the escapement trigger will cam off the torque bar lug when the escapement pawl clears the rack by .010" - .015".



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
706	15	1147443	Spring, Trigger Restoring	.04
706	14	1164559	Screw, Adjusting	.10
706	20	37913	Nut	.04
740	18	1147443	Spring, Dead Key	.03

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Serviceability ● Use applicable service code

PARTS INFORMATION: Scrap existing stock of 1133511, 1138035 and 1128101 on a Debit Memo charging OP HQ Acct. Code 14-090-0232 and note this CEM as authorization. Reorder using same part numbers.

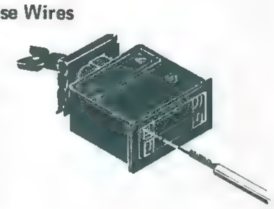
67 SAFETY

9-23-70

SUBJECT: "Quick-Wire" Switches — Loose Wires

SAFETY LOCATION: Off/On Switch. Many switches used on late model "Selectric" and Typebar Typewriters, and other OP equipment, incorporate the "Quick-Wire" connection feature.

SAFETY PRECAUTIONS: When experiencing electrical or switch problems the possibility exists that the wires are not being held firmly in place by this "Quick-Wire" feature.



CAUTION: Before checking this connection, remove power by unplugging the machine. Pull on each of the 4 wires — they should remain firmly locked in the switch. If any of the four wires are not held firmly, the switch should be replaced.

NOTE: The remaining wires can be removed by inserting a small "Bristo" wrench (or similar tool) into the switch beside the individual wires.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Safety ● CODE: 32

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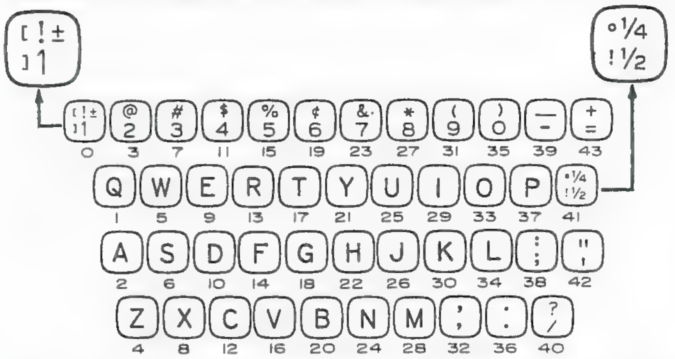
⑱ ENGINEERING CHANGE

Mech. Code 702-721 10-7-70

SUBJECT: **American National Standards Institute Keyboard And Elements**

PURPOSE: The new keyboard (Code 101) and elements meet the character arrangement requirements of ANSI and are compatible with the Model D 101 correspondence keyboard. The new 101 keyboard will replace the present 01 Standard keyboard, Ref. 700, page 14 in the "Selectric" Typewriter Parts Catalog, F/N 241-5102-8.



The above keyboard arrangement is standard with the Type Codes: 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 001, 005, 006, 007, 008, 010, 012, 014, 015, 019, 020, 021, 025, 026, 027, 028, 029, 030, 031, 032, 033, 034, 035, 036, 039, 050, 053, 055, 059, 060, 067, 068, 070, 085, 086, 090.

The new elements will have !/1 in position 0 and ¼/½ in position 41 as indicated by the large symbols on the keybuttons. Present elements are compatible with the new keyboard as indicated by the small symbols on the keybuttons. New elements are not compatible with old keyboard arrangements.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION — Elements	PRICE
702	180	1167129	Adjutant Fractions —ANSI	18.00
702	180	1167130	Advocate Fractions — ANSI	18.00
702	180	1167131	Artisan 12 Fractions — ANSI	18.00
702	180	1167132	Courier 12 Fractions — ANSI	18.00
702	180	1167133	Courier 12 Italic Fractions — ANSI	18.00
702	180	1167134	Courier 10 Fractions — ANSI	18.00
702	180	1167135	Delegate Fractions — ANSI	18.00
702	180	1167136	Dual Gothic Fractions — ANSI	18.00
702	180	1167137	Elite Fractions — ANSI	18.00
702	180	1167138	Letter Gothic Fractions — ANSI	18.00
702	180	1167139	Light Italic Fractions — ANSI	18.00
702	180	1167140	Manifold Fractions — ANSI	18.00
702	180	1167141	Orator Fractions — ANSI	18.00
702	180	1167142	Pica Fractions — ANSI	18.00
702	180	1167143	Prestige Elite Fractions — ANSI	18.00
702	180	1167144	Scribe Fractions — ANSI	18.00
702	180	1167145	Script Fractions — ANSI	18.00
			DESCRIPTION — Keybuttons	
721	31	1237228	Pos. 0 Accent Gray	.35
721	31	1237229	Pos. 0 Light Blue	.35
721	31	1237230	Pos. 0 Navy	.35
721	31	1237231	Pos. 0 Charcoal Gray	.35
721	31	1237232	Pos. 41 Accent Gray	.35
721	31	1237233	Pos. 41 Light Blue	.35
721	31	1237234	Pos. 41 Navy	.35
721	31	1237235	Pos. 41 Charcoal Gray	.35

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

ESTIMATED INSTALLATION TIME: .2 hours

CHANGE TYPE: Product Feature ● Use Service Code 36 when making change on new machines at sales request. Invoice at the established hourly rate and minimum service rates for parts, labor, travel expense, and applicable local taxes when installing on all per call machines and M/A machines when a specific call is required for the express purpose of installing the feature.

When making this conversion, type elements should be ordered thru the Branch Office and billed by the Branch Office. Customer Engineering should invoice customers for labor and keybuttons only, not type elements.

Installation on M/A or per call machines made at the time of a regularly scheduled inspection or service call must be invoiced for the lower of the following rates:

1. *A flat rate of $5.65 for each installation. Complete a DCI using Service Code 01; charge $.70 for parts, $4.95 for labor, plus local taxes.*
2. *Invoice the established hourly service charge for parts and labor whenever it results in a lower cost to the customer.*

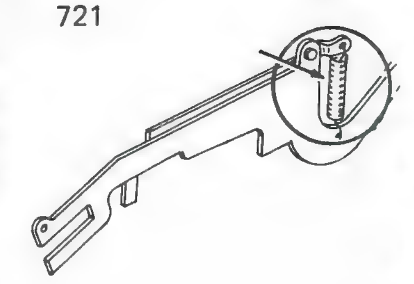
EXAMPLE: Six installations at the flat rate equals $33.90. If the installations were completed in one hour the customer should be invoiced at the established rate of $16.50 plus $4.20 for parts for a total charge of $20.70.

PARTS INFORMATION: Order Lexington.

69 SERVICE INFORMATION

Mech. Code 721 10-7-70

CYCLE CLUTCH LATCH RESTORING SPRING



Some machines may have been shipped to the Field with a heavy spring on the cycle clutch latch. If experiencing a "heavy" or "stiff" keyboard replace this spring, P/N 1123827.

70 SERVICE INFORMATION

Mech. Code 703 10-21-70

OPERATIONAL CAM & RATCHET ASM. – SET SCREW – CONE POINTED

To prevent the cam and ratchet assembly from coming loose on the operational shaft, a cone pointed setscrew, P/N 316781 is being used on Model 7X3 and 7X5 machines. When readjustment of the cam and ratchet assembly is necessary, it may require a slight rotation of the operational shaft since the cone pointed setscrew makes a deeper indentation than the previous cup-pointed screw.

NOTE: This change has not been incorporated in the 7X1 because of the frequent readjustment of this assembly, since it determines the endplay of the operational shaft.

71 SERVICE INFORMATION

Mech. Code 708 10-21-70

SERIAL NUMBERS "SELECTRIC" TYPEWRITER – PREFIX CHANGE

The S/N's on all "Selectric" Typewriters manufactured after August 5, 1970 will begin with the number nine (9).

The first machines manufactured with the prefix 9 are as follows:

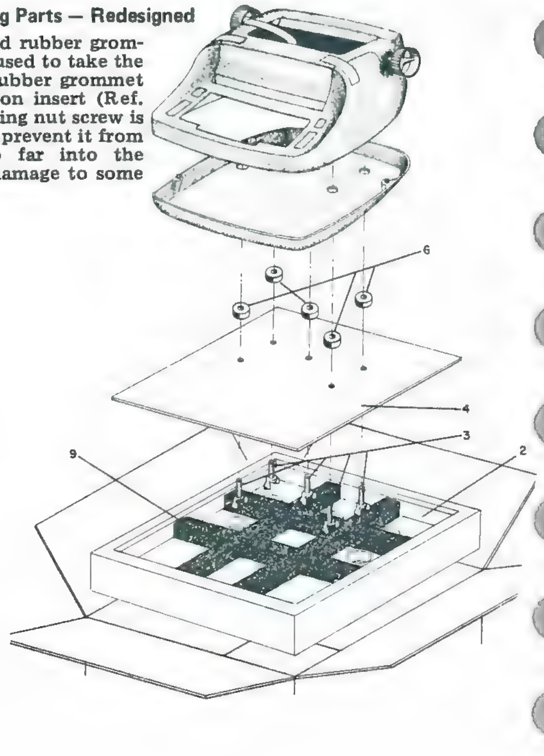
7X1	9,400,000	August 5, 1970
7X3	9,020,000	August 5, 1970
7X5	9,210,000	July 6, 1970

⑫ ENGINEERING CHANGE

Mech. Code 765 10-21-70

SUBJECT: **Packing Parts – Redesigned**

PURPOSE: A solid rubber grommet is now being used to take the place of the slit rubber grommet and the white nylon insert (Ref. 5&6). A shorter wing nut screw is also being used to prevent it from being turned too far into the machine causing damage to some mechanisms.



CEM No. 72 (Cont'd)

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
3	None	Screw, Wing	None
6	None	Grommet	None

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Manufacturing Improvement ● Use applicable service code.

PARTS INFORMATION: Order packing materials by description on P&S Requisition, Lexington.

73 ENGINEERING CHANGE

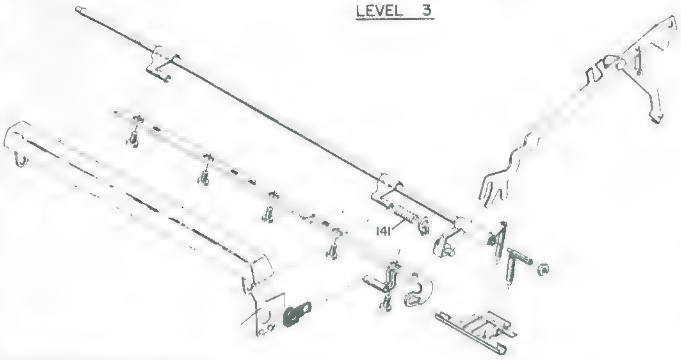
Mech. Code 717 — 10-21-70 (Revised) 1-27-71

SUBJECT: Spacebar – Spring Loaded To Remove Side Play

PURPOSE: To eliminate any interference between the keylever restoring springs and the spacebar stem and control the end play of the spacebar button.

SOLUTION: The left hand clip on the spacebar shaft has been eliminated and a compression spring (Ref. 141) has been added on the right hand bracket of the spacebar shaft. This spring fits on the bracket and keeps the spacebar stem spring-loaded against the grip clip.

ADJUSTMENTS: At rest the spacebar is spring-loaded to the right and the grip clip should be adjusted left to right so the spacebar stem is centered between the keylever restoring springs.



PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
141	1175095	Spring, Compression	.01

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Reliability ● Use Applicable Service Code

PARTS INFORMATION: Order Lexington.

74 SERVICE INFORMATION

Mech. Code 751 — 10-21-70

STROKE COUNTER – HARDWARE B/M

Stroke counter B/M's are no longer SER items and may be ordered through regular channels.

Ref.	B/M numbers are:
9	7X1-1275433 7X3 & 7X5-1275434

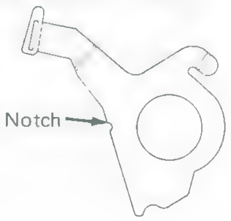
These B/M's contain all the hardware necessary for installation. The actual stroke counter of the desired ratio must be ordered separately.

75 SERVICE INFORMATION

Mech. Code 712-720 — 11-18-70

54-TOOTH B/M – INCORRECT LINE POSITION RESET LEVER

Some 54T ratchets B/M's were released to the Field with the wrong line position reset lever. This lever is for use with a 36T ratchet and can be identified by a notch along the edge of the lever. The correct lever (no notch) to be ordered and used with this B/M is P/N 1164965. Future B/M's shipped from Lexington will have the correct levers.

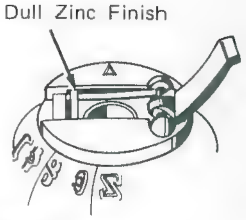


76 SERVICE INFORMATION

Mech. Code 702 — 11-18-70

TYPE ELEMENTS – LATCH SPRING BREAKAGE

Latch springs may break on some type elements manufactured between June 20 and September 29, 1970.



Type elements with a dull zinc finish latch spring may have this problem. Type elements springs with a bright nickel finish are not subject to breakage.

Type elements of recent manufacture should be inspected on every service call or inspection for a broken latch spring. Some problems which can be caused by a broken latch spring are:

1. Element cannot be removed by the operator.
2. Print quality (alignment or impression) may be affected.
3. Uneven underscore.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

Use Code 32 when an element is replaced only if a dull zinc finish latch spring is broken. Code 32 expires 11-4-71. Application 3.

77 SERVICE INFORMATION

Mech. Code 708 — 11-18-70

FRAMES – ALPHABETICAL MARKINGS BY ASSEMBLY LINE

Manufacturing has assigned a letter of the alphabet to each assembly line. This letter will be hand stamped on the inside of the power frame on the rib located between the print shaft and the tapes at the right hand side of the machine.

Information on future Field problems should include both the serial number and the stamped letter on the machine. This stamping may possibly get wiped away in time but its main purpose is for feedback during the warranty period of the machine.

NOTE: This letter is not to be used in call reporting information.

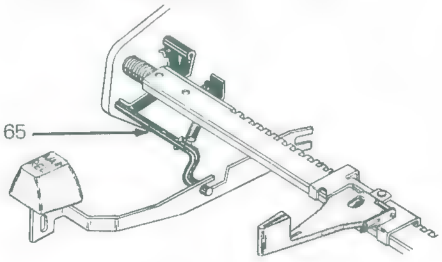
78 SERVICE INFORMATION

Mech. Code 709 — 11-18-70

MARGIN RELEASE SHAFT 7X3, 7X5

A question has come up recently on how to order the one piece margin release shaft that replaced Ref. 65 and its associated parts. This P/N is in the latest Part No./Price List, P/N 241-5103-1 (Nov., 1970) under Mech. 709, Ref. 65.

Ref. 65	1147173	Shaft, 7X3	L-3	.75
Ref. 65	1147174	Shaft, 7X5	L-3	.70



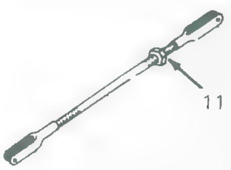
79 ENGINEERING CHANGE

Mech. Code 706 — 11-18-70

SUBJECT: Escapement Trip Link – New Locking Nut

PURPOSE: The nut is now being put on the opposite end of the escapement trip link because the larger threads on this end of the link provide more thread engagement than the present method of assembly.

NOTE: On new machines the nut is still next to the rear clevis because the assembled link has been reversed for ease of adjustment at the plant.



PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
11	1147447	Nut	.05

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CEM No. 79 (Cont'd)

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Reliability ● Use applicable service code.

PARTS INFORMATION: Order Lexington. Retain present level nut, P/N 1127728 for use in other mechanisms.

80 ENGINEERING CHANGE

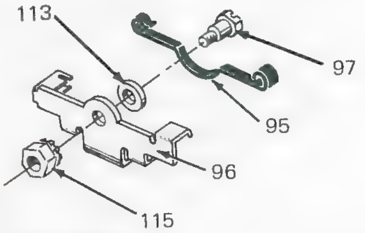
Mech. Code 702

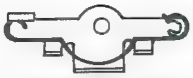
12-2-70

SUBJECT: Carrier Shoe – Redesigned – Non-Adjustable

PURPOSE: Eliminate adjustment of carrier shoe. A spring-loaded non-adjustable carrier shoe is possible because of the uniform thickness of presently manufactured escapement racks.

SOLUTION: The carrier shoe fits around the escapement rack and a tension spring rides on top of the escapement rack to constantly remove all play in an upward direction.





Assembled View

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
702	95	1174497	Spring, Tension	.05
	96	1174494	Shoe, Carrier	.40
	97	1174496	Stud	.05
	113	1164218	Washer	.01
	115	1174157	Nut	.01

NOTE: When installing redesigned carrier shoe, hold down on rear of carrier so both upper lugs contact escapement rack before tightening shoe to carrier.

MACHINES AFFECTED: Machines after S/N 7X1-9415199, 7X3-9048798, 7X5-9254764 have this change.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Manufacturing ● Application 3 ● Use applicable service code.

PARTS INFORMATION: Order Lexington. Retain present level parts for Field replacement.

81 ENGINEERING CHANGE

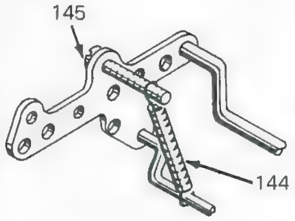
Mech. Code 721

12-2-70

SUBJECT: Cycle Clutch Bail Dampers

PURPOSE: The cycle clutch bail dampers have been replaced by two new springs.

SYMPTOM: The former dampers were originally installed to prevent the bail from bouncing down and retripping the cycle clutch causing an additional cycle. The new spring will serve the same purpose.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	QTY	PRICE
721	144	1147354	Spring, Damper	2	.03
	145	1128113	Screw, Damper	2	.10

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Manufacturing ● Use applicable service code.

PARTS INFORMATION: Order Lexington. Retain present level parts for use with other products.

82 SAFETY

Mech. Code 711

12-2-70

SUBJECT. Line Cord Replacement

SAFETY LOCATION: Any damaged line cord, plug, machine receptical or lead wires.

SAFETY PRECAUTIONS: The use of a replacement type plug is not authorized on OPD "Selectric" Typewriters. Double insulation standards applying to current production machines, require a molded plug at the end of the line cord.

SAFETY CORRECTIVE ACTION: The same diameter cord must be used for replacement. The former level large diameter cord cannot be replaced with the current level smaller diameter cord. There is insufficient insulation on the smaller cord to allow a safe installation without the use of the molded strain reliefs made on the exact replacement cord.

Line cord restraining clamps should hold the line cord securely. They should be replaced if necessary, not formed to meet this condition. Care must be taken to route the wires to prevent their contact with moving parts.

Taut line cords can cause damage to cord insulation, resulting in a potential safety hazard. Leave sufficient slack in line cords or cable to allow the machine to tilt up.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Safety ● Application 3 ● Use applicable service code.

83 ENGINEERING CHANGE

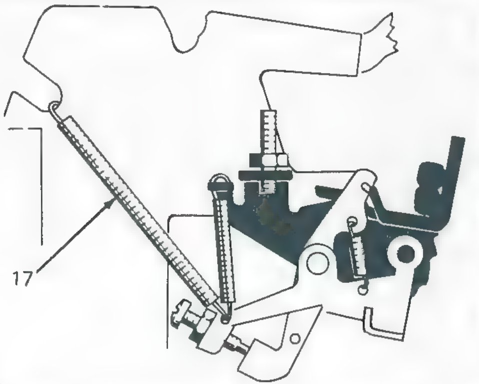
Mech. Code 706

12-30-70

SUBJECT: Escapement – "Skipping" – New Trigger Mechanism

PURPOSE: The trigger upstop adjustment must be made properly on 7X3 & 7X5 machines equipped with the new trigger mechanism. By adjusting the upstop for .001" to .005" clearance with the trigger arm it will dampen the vibration or bounce of the escapement trigger when it restores to the rest position.

Since 7X1 machines do not have an upstop, a spring (Ref. 17) has been added. This spring acts to prevent excessive overthrow of the trigger assembly thereby reducing its tendency to bounce when restoring.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
706	17	1133669	Spring, Trigger 7X1	.15

MACHINES AFFECTED: 7X1 above S/N 9416804 have this change.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Reliability ● Application 3 ● Code 32 when installing spring on 7X1 machines. Expires 12-31-71

PARTS INFORMATION: Order Lexington.

84 ENGINEERING CHANGE

Mech. Code 718

12-30-70

SUBJECT: Tab Rack – Friction Fit

PURPOSE: The silicone-filled tab rack has been replaced by a friction fit tab rack on 7X1's. This change will be incorporated into the 7X3's and 7X5's at a later date. Tab rack part numbers remain the same, however, the early level gang clear bracket (Ref. 132) must be used with the friction fit rack.

ADJUSTMENTS: Remain the same.

MACHINES AFFECTED: Machines above S/N 7X1-9416426 have the new style tab rack.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Manufacturing ● Application 3 ● Use applicable service code.

85 SERVICE INFORMATION

Mech. Code 718

12-30-70

TAB STOPS – RANDOMLY SETTING AND CLEARING

Tab stops may randomly set or clear on some "Selectric" Typewriters after repeated tab operations. If the problem is encountered, change the tab rack.

Serial Range Affected:

7X1 – 5741289	5764696
7X3 – 5138074	5173610
7X5 – 5492144	5527854

NOTE: Either silicone-filled tab racks or friction-fit tab racks (when available) may be used for replacement.

THE FOLLOWING INFORMATION FOR IBM USE ONLY:

Code 32 is authorized only on machines experiencing above problem within the above serial ranges. Application 3. Expires 12-31-71.

86 ENGINEERING CHANGE

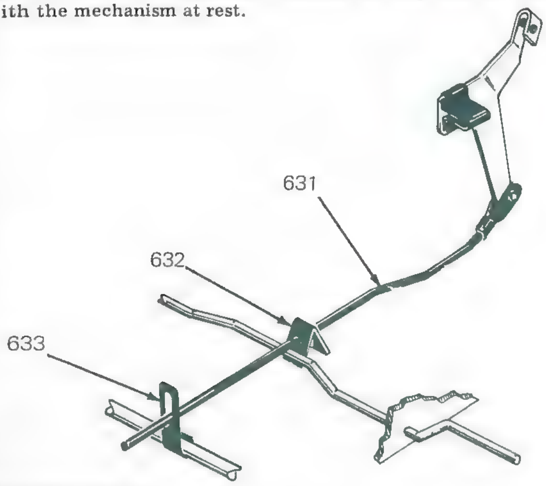
Mech. Code 703

1-13-71

SUBJECT: Carrier Return Print Interlock — Redesigned

PURPOSE: Simplify adjustment of carrier return interlock link.

ADJUSTMENTS: Squeeze clip (Ref. 632) and slide it along the link to provide .001" to .015" clearance between the clip and the interrupter bail with the mechanism at rest.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
703	631	1147407	C/R Print Int. Link	.35
	632	1147401	Clip	.04
	633	1147402	Guide, Link	.04

NOTE: Level 1 parts are no longer available. If either Ref. 625, 626 or 627 need to be replaced order all three new style parts.

MACHINES AFFECTED: Machines above S/N 7X1-9416222, 7X3-9049838, 7X5-9245762.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Manufacturing ● Application 3 ● Use applicable service code.

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N's 1175245, 1175909 and 1175246, on a Debit Memo, charging OP HQ Acct. Code 14-090-0232 and note this CEM as authorization.

87 SERVICE INFORMATION

Mech. Code 704

1-13-71

COVERS — LOOSE SHOCK MOUNTS — 7X5

Shock mounts (Ref. 275, 278) on some recently manufactured "Selectric" Typewriters, Model 7X5, may be loose in the bottom cover. This could allow some machines to move enough in the cover to cause excessive noise. Oversized shock mounts are available and should be installed when this situation is encountered.

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
704	275	1287001	Shock Mount, Large	.60
	278	1287000	Shock Mount, Large	.60

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

SERVICE CODE 32 , Expires: 12-1-71 ● Application 3

PARTS INFORMATION: Order Lexington.

88 SERVICE INFORMATION

Mech. Code 706

1-13-71

ESCAPEMENT TORQUE BAR — LOSS OF PAWL CLEARANCE

If a problem is encountered maintaining carrier return pawl clearance, check the escapement pawl mounting stud for wear at the point that contacts the escapement torque bar. If this problem occurs on machines between S/N's 7X1 — 9415298 — 9418387, 7X3 — 9048956 — 9059203, 7X5 - 9244764 — 9253549, replace the escapement torque bar, pawl mounting stud, and the escapement and backspace pawls.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use code 32 when it is necessary to replace these parts on machines in the above serial number range. Expires 12/31/71 ● Application 3

89 ENGINEERING CHANGE

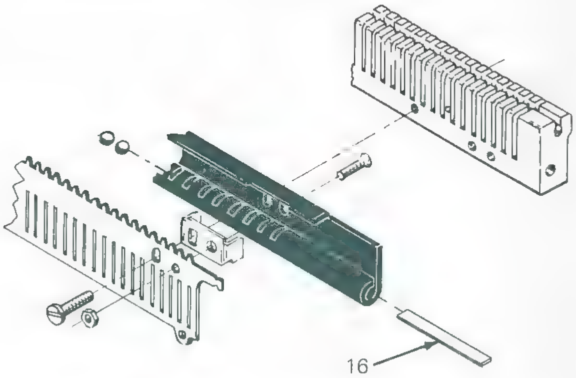
Mech. Code 721

1-13-71

SUBJECT: Compensator Tube End Plug — Redesigned

PURPOSE: Wedge type end plug now used.

ADJUSTMENTS: Latch down last interposer on RH side of keyboard. Gently push end plug into compensator tube with pliers until it stops. Push down gently on keybutton near the RH end and twist the end plug until it is wedged tight. Repeat on LH side of keyboard.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
721	16	1174231	End Plug	.06

MACHINES AFFECTED: Machines above 7X1-9416804, 7X3-9059219, and 7X5-9254849, have this change.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Manufacturing ● Application 3 ● Use applicable service code

PARTS INFORMATION: Order Lexington.

90 SAFETY

1-13-71

SUBJECT: Power Cleaner, P/N 9900469

SAFETY LOCATION: Under full stalled conditions, with power applied, it is possible for the Power Cleaner, P/N 9900469, to catch fire. This condition must be maintained in excess of five minutes for open flames to result.

SAFETY PRECAUTIONS: Under no circumstances is the Power Cleaner to be left on unattended or stalled with electrical power applied.

SAFETY EXPOSURES: The unattended use of a Power Cleaner for other than its intended purpose could result in loss of property or personal injury.

91 ENGINEERING CHANGE

Mech. Code 701-704-706-709-718-722

1-27-71

SUBJECT: Nine Pitch Court Reporter "Selectric" Typewriter Replacement Parts

PURPOSE: Replacement parts for 7X1 9 pitch machines are available for Field use.

PARTS REQUIRED

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
701	301	1135954	Backspace Rack, 7X1 — 9P	7.25
704	54	1280658	Margin Scale, 7X1 — 9P	4.10
706	27	1135953	Escapement Rack, 7X1 — 9P	10.75
709	33	1280656	Margin Rack, 7X1 — 9P	34.50
718	35	1135948	Tab Rack, 7X1 — 9P	22.50
722	216	1280657	Card Holder, 9P	.90

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Serviceability ● Use applicable service code.

PARTS INFORMATION: Order Lexington.

IBM, "Executive", "Flexowriter", "IBM EXECUTARY", and "Selectric" are registered trademarks of the International Business Machines Corp.

92 ENGINEERING CHANGE

Mech. Code 708

1-27-71

SUBJECT: Center Bearing Replacement

PURPOSE: A tool is now available for replacement of "Selectric" Typewriter center bearings.

SYMPTOM: If normal maintenance techniques fail to resolve the problems listed below, the problem may be caused by a worn center bearing.

1. Typehead Detenting Keeps Changing
2. Decrease In Motor Speed
3. Negative 5 Latch Adj. Keeps Changing

SOLUTION: The following procedure should be used when checking for a worn bearing.

Remove headplay in the clockwise direction and note the position of a typehead tooth to the rotate detent.

Push down and towards the front on the cycle clutch pulley. If there is more than .040" movement (Approx. 1/2 the distance from the top of a typehead tooth to the bottom of the notch)from the point referenced, the bearing should be replaced.

Center Bearing Replacement Procedure

1. Remove the cycle shaft, cycle clutch pulley, cycle clutch latch and slide the operational shaft to the right far enough to allow removal of the torque limiter and the carrier return and tab pinion gears. The cycle shaft and cycle clutch pulley should be replaced with new parts.
2. Install the bearing tool as shown in Fig. 1. Gauge the position of the worn bearing by placing the Hooverometer foot against the power frame and slide the Hooverometer head against the bearing pusher. This setting will be used to reposition the new bearing.

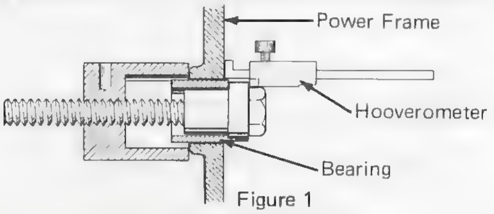


Figure 1

3. By tightening the bolt, push the worn bearing out of the power frame.

   NOTE: If the cup turns, a tool can be inserted in the hole near the end of the cup to hold it stationary.

4. Using a new bearing, install the tool as shown in Fig. 2 with the tool "finger" tight. Align the lubrication hole in the new bearing so it will line up with the hole in the power frame when the bearing is installed.

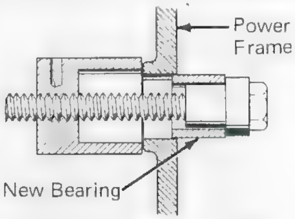


Figure 2

5. Press the new bearing into the power frame until the Hooverometer just spans the distance originally measured in Step 2 (Fig. 1)
6. Reassemble the machine. Be sure to check cycle shaft end play as it may have changed with the new bearing and cycle shaft assembly installed.

PARTS REQUIRED:

MECH.	PART NO.	DESCRIPTION	PRICE
708	1203726	Center Bearing	1.25

NOTE: Center bearing tool P/N 9900523 requires 9/16 wrench P/N 173995 or equivalent.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: 4.0 hours

CHANGE TYPE: Serviceability ● Application 3 ● Use applicable service code

PARTS INFORMATION: A center bearing tool has been shipped to the attention of the CE Manager in each Branch Office. Usage of the tool will be low and one tool will satisfy most Branch Office requirements. Bearings are available from Lexington.

93 SERVICE INFORMATION

1-27-71

PUBLICATIONS – "SELECTRIC" TYPEWRITER

As of December 23, 1970 the following "Selectric" Typewriter publication has been released to the Field.

FORM NO.	NAME	PRICE
241-5615	Service Manual — "Selectric" Typewriter	2.20

94 ENGINEERING CHANGE

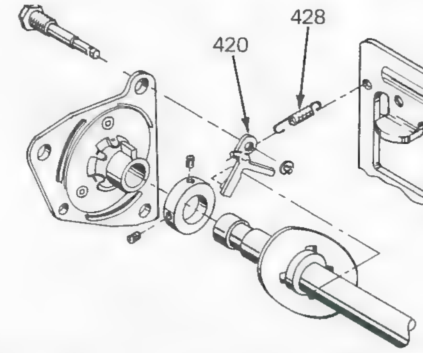
Mech. Code 723

1-27-71

SUBJECT: Cycle Shaft Check Pawl and Check Pawl Spring — Redesigned

PURPOSE: To improve the latching of the cycle shaft with the check pawl.

Spring loading the check pawl to the rear removes play to allow a accurate drive adjustment of the cycle clutch spring.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
723	420	1138039	Pawl, Check	.35
	428	1147349	Spring	.05

NOTE: When replacing check pawl on machines between
7X1 — 5788754 — 9422043
7X3 — 5236767 — 9071026
7X5 — 5595975 — 9269102

Also order reference 428. Machines above this serial range have the new level parts installed.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Application 3 ● Use applicable service code

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1138039 on a Debit Memo, charging OP HQ Acct. Code 14-090-0232 and noting this CEM as authorization. Reorder using same part number.

95 SERVICE INFORMATION

2-24-71

CORD REPLACEMENT PROCEDURE

The following cord replacement technique has some advantages over methods previously published. Some individuals may find one method superior to another, however, it is felt that the method described below utilizes most of the advantages of all those previously published.

1. Remove both cords and hand-cycle the machine until the mainspring tension is relaxed.
2. Disconnect the carrier return unlatching link.

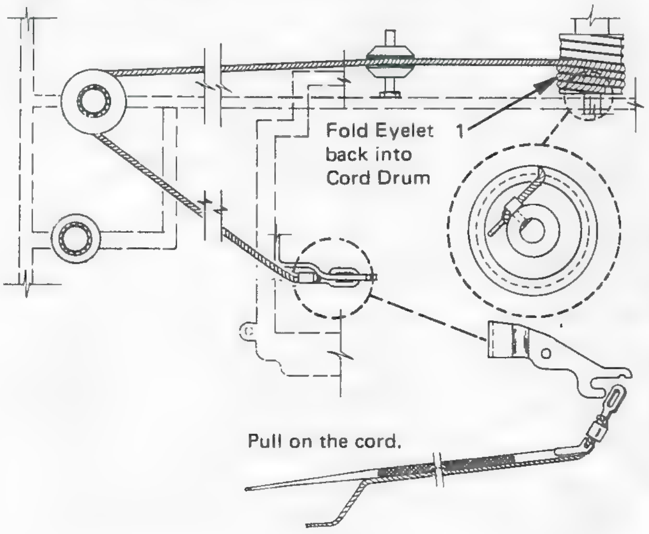


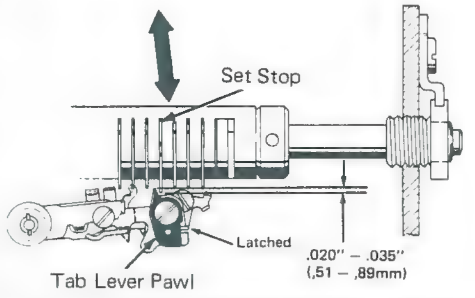
Figure 1

106 SERVICE INFORMATION Mech. Code 718 6-16-71

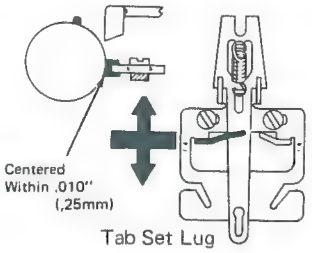
TAB STOPS CLEARING – FRICTION DETENT TAB RACKS

When experiencing self-clearing tabs, the following adjustments should be checked. Preliminary Adjustment: Adjust the tab rack rotationally so the tab lever pawl will contact the tab rack final stop.

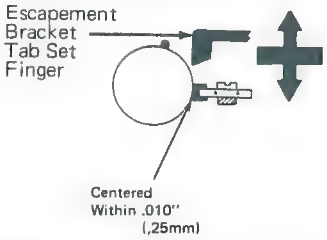
1. Tab lever pawl should be adjusted front-to-rear to engage a set tab stop .020" - .035".



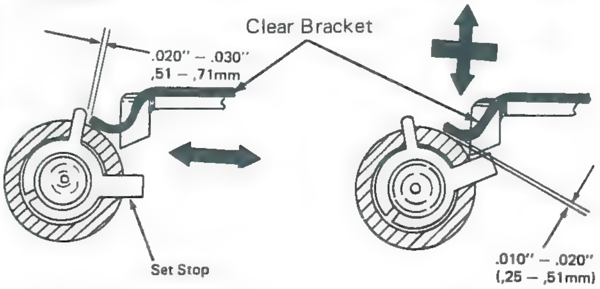
2. Tab set lug — form the lug so that when a tab stop is set, the tab lever pawl will contact the center of a set tab stop ±.010".



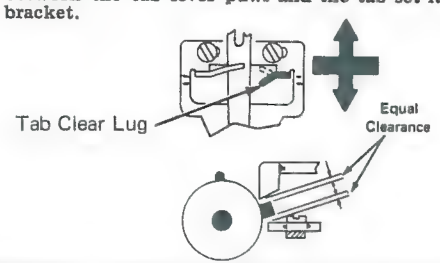
If the tab stops, located on either side of the tab stop that is being set, contact the underside of the tab clear bracket before the proper set position is obtained, the tab set finger at the rear of the escapement bracket should be formed down.



3. Tab clear bracket should be adjusted front-to-rear for .020"-.030" clearance with the clear lug of a set tab stop. The clear bracket should be formed up or down for .010"-.020" clearance with the tab rack.



4. Tab clear lug should be formed down so that when a tab stop is cleared and the tab rack is at rest, the clear tab stop is centered between the tab lever pawl and the tab set lug of the escapement bracket.



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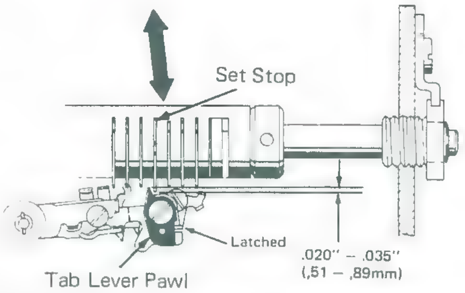
106 SERVICE INFORMATION

Mech. Code 718 6-16-71

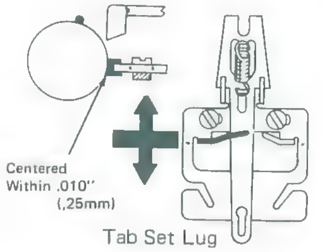
TAB STOPS CLEARING – FRICTION DETENT TAB RACKS

When experiencing self-clearing tabs, the following adjustments should be checked. **Preliminary Adjustment:** Adjust the tab rack rotationally so the tab lever pawl will contact the tab rack final stop.

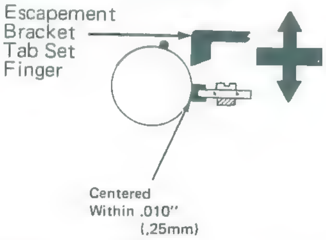
1. Tab lever pawl should be adjusted front-to-rear to engage a set tab stop .020" - .035".



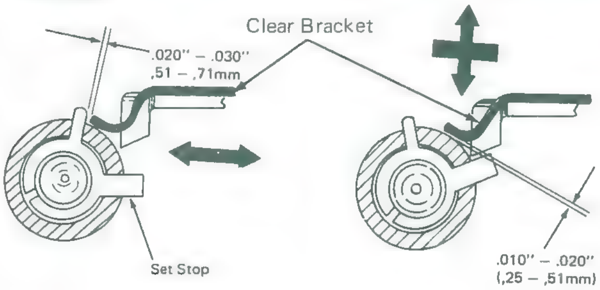
2. Tab set lug — form the lug so that when a tab stop is set, the tab lever pawl will contact the center of a set tab stop ±.010".



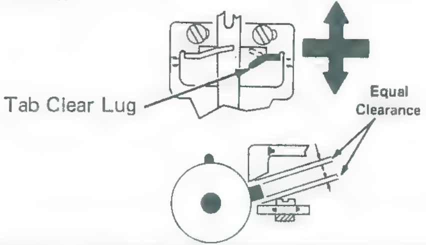
If the tab stops, located on either side of the tab stop that is being set, contact the underside of the tab clear bracket before the proper set position is obtained, the tab set finger at the rear of the escapement bracket should be formed down.



3. Tab clear bracket should be adjusted front-to-rear for .020"-.030" clearance with the clear lug of a set tab stop. The clear bracket should be formed up or down for .010"-.020" clearance with the tab rack.



4. Tab clear lug should be formed down so that when a tab stop is cleared and the tab rack is at rest, the clear tab stop is centered between the tab lever pawl and the tab set lug of the escapement bracket.

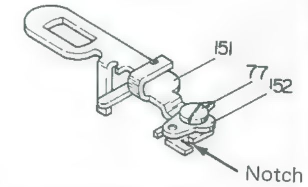


107 ENGINEERING CHANGE

Mech. Code 718 8-11-71

SUBJECT: Tab Lever And Tab Pawl – Redesigned

PURPOSE: A notch has been cut in the tab lever to provide both a latching surface for the tab latch and eliminate the need for a tab overthrow stop. The present tab overthrow stop will continue to be installed until a new clip for the dual velocity cable is released.



153 Tab Lever Asm.

ADJUSTMENTS: Remain the same.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
718	77	1138802	Screw	.10
	151	1147651	Lever, Tab, Level 3	.30
	152	1147652	Pawl, Tab, Level 3	.05
	153	1287297	Tab Lever Assembly	.45

NOTE: Although Level 2 component parts remain available for use on other products, the new tab lever assembly may be replaced as a unit on "Selectric" Typewriters with Level 2 Parts.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Mfg. ● Appl. 3 ● Use applicable ser. code.

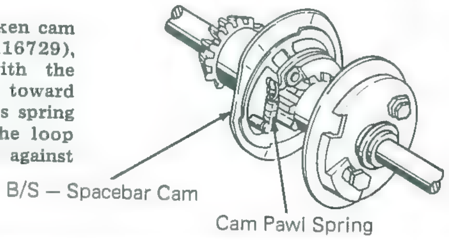
PARTS INFORMATION: Order Lexington.

108 SERVICE INFORMATION

Mech. Code 717 8-11-71

SPACEBAR – BACKSPACE CAM SPRING – PROPER INSTALLATION

When replacing a broken cam pawl spring (P/N 1116729), install the spring with the open side of the loop toward the cam. This prevents spring breakage caused by the loop of the spring rubbing against the cam wheel.



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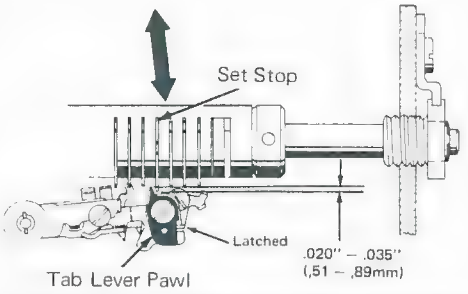
106 SERVICE INFORMATION

Mech. Code 718 6-16-71

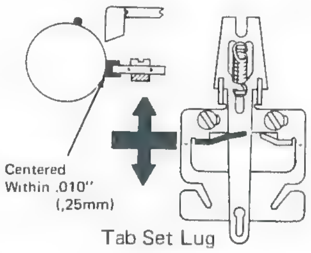
TAB STOPS CLEARING – FRICTION DETENT TAB RACKS

When experiencing self-clearing tabs, the following adjustments should be checked. **Preliminary Adjustment:** Adjust the tab rack rotationally so the tab lever pawl will contact the tab rack final stop.

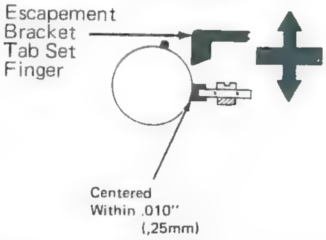
1. Tab lever pawl should be adjusted front-to-rear to engage a set tab stop .020" - .035".



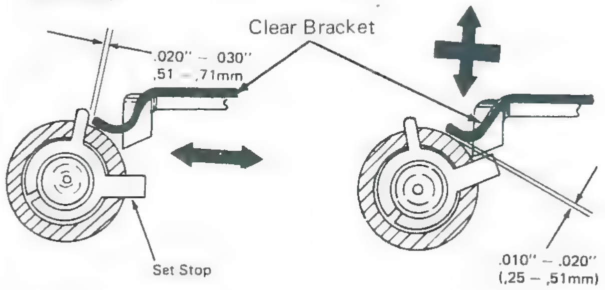
2. Tab set lug – form the lug so that when a tab stop is set, the tab lever pawl will contact the center of a set tab stop ±.010".



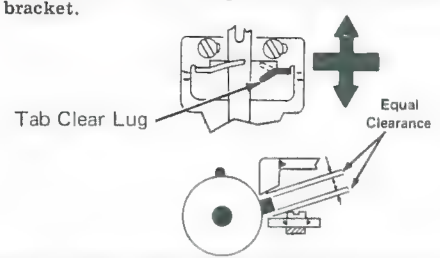
If the tab stops, located on either side of the tab stop that is being set, contact the underside of the tab clear bracket before the proper set position is obtained, the tab set finger at the rear of the escapement bracket should be formed down.



3. Tab clear bracket should be adjusted front-to-rear for .020"-.030" clearance with the clear lug of a set tab stop. The clear bracket should be formed up or down for .010"-.020" clearance with the tab rack.



4. Tab clear lug should be formed down so that when a tab stop is cleared and the tab rack is at rest, the clear tab stop is centered between the tab lever pawl and the tab set lug of the escapement bracket.

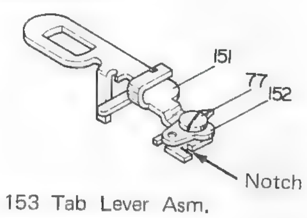


107 ENGINEERING CHANGE

Mech. Code 7.18 8-11-71

SUBJECT: Tab Lever And Tab Pawl – Redesigned

PURPOSE: A notch has been cut in the tab lever to provide both a latching surface for the tab latch and eliminate the need for a tab overthrow stop. The present tab overthrow stop will continue to be installed until a new clip for the dual velocity cable is released.



ADJUSTMENTS: Remain the same.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
718	77	1138802	Screw	.10
	151	1147651	Lever, Tab, Level 3	.30
	152	1147652	Pawl, Tab, Level 3	.05
	153	1287297	Tab Lever Assembly	.45

NOTE: Although Level 2 component parts remain available for use on other products, the new tab lever assembly may be replaced as a unit on "Selectric" Typewriters with Level 2 Parts.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Mfg. ● Appl. 3 ● Use applicable ser. code.

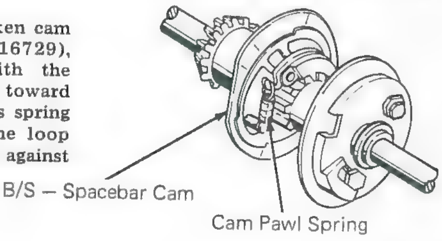
PARTS INFORMATION: Order Lexington.

108 SERVICE INFORMATION

Mech. Code 717 8-11-71

SPACEBAR – BACKSPACE CAM SPRING – PROPER INSTALLATION

When replacing a broken cam pawl spring (P/N 1116729), install the spring with the open side of the loop toward the cam. This prevents spring breakage caused by the loop of the spring rubbing against the cam wheel.



109 SERVICE INFORMATION

Mech. Code 712 8-25-71

PLATEN KNOBS – LOOSE INSERTS

On some recent machines the platen knobs are coming loose from the insert. Replace knobs when this condition is found.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

On machines under warranty use Service Code 12.

On machines out of warranty, use Service Code 32. Expires 2-29-72.

Parts Information: Scrap existing stock of 1123584, 1164727, 1164728 and 1138457. Reorder from Lexington using same part numbers. Debit Memo scrap to OPHQ Acct. 14-090-0421 and note this CEM as authorization.

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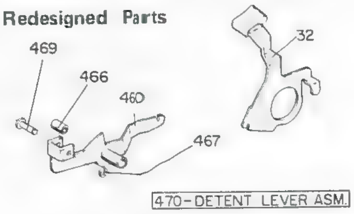
110 ENGINEERING CHANGE

Mech. Code
720

8-25-71

SUBJECT: 54 Tooth Index — Redesigned Parts



PURPOSE: The old style lever (Ref. 460) has been obsoleted. Order Ref. 470 and detent release lever (712-32) when replacing old style lever or roller.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
712	32	6518582	Detent Release Lever	.60
720	460	1204627	Lever	.65
	466	6512356	Roller	.25
	467	251989	Retainer	.04
	469	6512614	Pin	.04
	470	1147247	Detent Lever Assembly includes Ref. 460, 466, 467 & 469	1.10

MACHINES AFFECTED: Above 7X1-9444462, 7X3-9123921 and 7X5-9319263.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Use applicable ser. code.

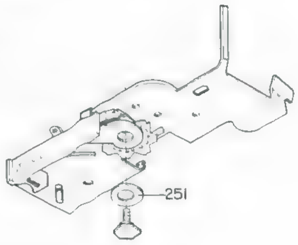
PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1141596. Debit Memo scrap to OPHQ Acct. 14-090-0421 and note this CEM as authorization.

111 ENGINEERING CHANGE

Mech. Code
714

8-25-71

SUBJECT: Stencil Lever — More Rigid



PURPOSE: The ribbon plate has been modified to prevent the stencil lever from slipping off the detent post.

SOLUTION: The spring washer (714-215) has been removed from the top of the stencil lever. A thicker washer has been added at the bottom of the stencil lever. This makes the stencil lever more rigid.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
714	251	1154416	Washer	.02

MACHINES AFFECTED: Above S/N 7X1-9445876, 7X3-9145175, and 7X5-9323432.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1175879. Debit Memo scrap to OPHQ Acct. 14-090-0421 and note this CEM as authorization.

112 ENGINEERING CHANGE

Mech. Code
702

9-8-71

SUBJECT: Tilt Detent Guide Screw — Shortened

PURPOSE: Provide clearance between tilt detent guide screw and typehead skirt.

SYMPTOM: Occasional malselection of tilt-3 characters caused by the screw binding against the typehead skirt. This may also appear as an escapement failure when using a repeat hyphen.

SOLUTION: Replace present screw with new level shorter screw.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
702	316	1147655	Screw	

MACHINES AFFECTED: Above 7X1-9453490, 7X3-9131240, 7X5-9329663 have short screw installed

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Code 32, Expires 9-15-72

PARTS INFORMATION: Order Lexington. Retain present level screw P/N 1124836 for use on other products.

113 SERVICE INFORMATION

9-8-71

SUBJECT: Publications — "Selectric" Typewriters

As of September 8, 1971 the following "Selectric" Typewriter publications have been released to the field. These manuals contain complete information on both "Selectric" and "Selectric" II Typewriters.

Form No.	Name	Price
241-5102-9	Parts Catalog — "Selectric" and "Selectric" II Typewriter	.50
241-5103-5	Part No./Price List	.25
241-5307-4	Pictorial Ref./Adj. Manual	.50
241-5615	Service Manual Supplement "Selectric" II Typewriter	1.55

THE FOLLOWING INFORMATION FOR IBM USE ONLY

For Product and Identification Codes see inside back cover of the Pict. Ref./Adj. Manual.

For call reporting the following codes apply to the "Selectric" II Typewriter.

Product Code 26
Identification:
1st Digit 8
2nd Digit 3 — Single Pitch
7 Dual Pitch
3rd Digit 3 — 11" Writing Line
5 — 13" Writing Line

106 SERVICE INFORMATION

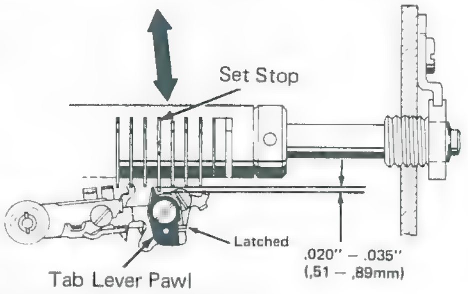
Mech. Code 718

6-16-71

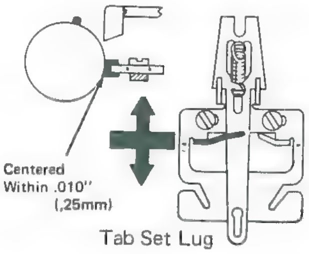
TAB STOPS CLEARING – FRICTION DETENT TAB RACKS

When experiencing self-clearing tabs, the following adjustments should be checked. **Preliminary Adjustment:** Adjust the tab rack rotationally so the tab lever pawl will contact the tab rack final stop.

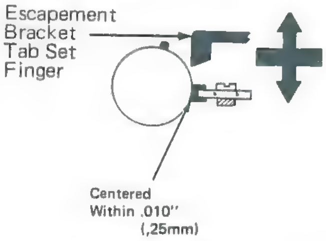
1. Tab lever pawl should be adjusted front-to-rear to engage a set tab stop .020" - .035".



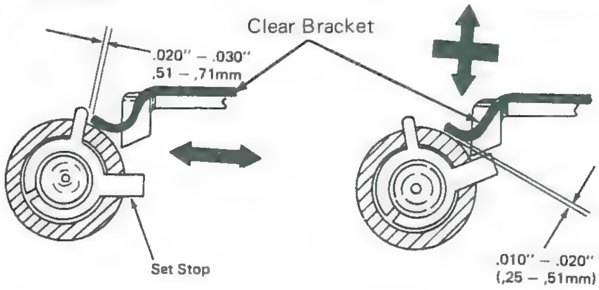
2. Tab set lug — form the lug so that when a tab stop is set, the tab lever pawl will contact the center of a set tab stop ±.010".



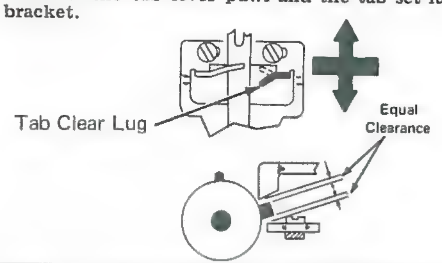
If the tab stops, located on either side of the tab stop that is being set, contact the underside of the tab clear bracket before the proper set position is obtained, the tab set finger at the rear of the escapement bracket should be formed down.



3. Tab clear bracket should be adjusted front-to-rear for .020"-.030" clearance with the clear lug of a set tab stop. The clear bracket should be formed up or down for .010"-.020" clearance with the tab rack.



4. Tab clear lug should be formed down so that when a tab stop is cleared and the tab rack is at rest, the clear tab stop is centered between the tab lever pawl and the tab set lug of the escapement bracket.



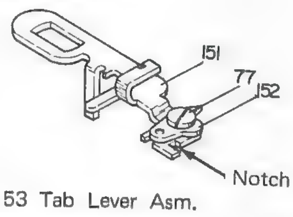
107 ENGINEERING CHANGE

Mech. Code 718

8-11-71

SUBJECT: Tab Lever And Tab Pawl – Redesigned

PURPOSE: A notch has been cut in the tab lever to provide both a latching surface for the tab latch and eliminate the need for a tab overthrow stop. The present tab overthrow stop will continue to be installed until a new clip for the dual velocity cable is released.



ADJUSTMENTS: Remain the same.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
718	77	1138802	Screw	.10
	151	1147651	Lever, Tab, Level 3	.30
	152	1147652	Pawl, Tab, Level 3	.05
	153	1287297	Tab Lever Assembly	.45

NOTE: Although Level 2 component parts remain available for use on other products, the new tab lever assembly may be replaced as a unit on "Selectric" Typewriters with Level 2 Parts.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Mfg. ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington.

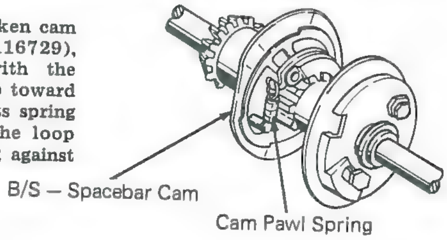
108 SERVICE INFORMATION

Mech. Code 717

8-11-71

SPACEBAR – BACKSPACE CAM SPRING – PROPER INSTALLATION

When replacing a broken cam pawl spring (P/N 1116729), install the spring with the open side of the loop toward the cam. This prevents spring breakage caused by the loop of the spring rubbing against the cam wheel.



109 SERVICE INFORMATION

Mech. Code 712

8-25-71

PLATEN KNOBS – LOOSE INSERTS

On some recent machines the platen knobs are coming loose from the insert. Replace knobs when this condition is found.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

On machines under warranty use Service Code 12.

On machines out of warranty, use Service Code 32. Expires 2-29-72.

Parts Information: Scrap existing stock of 1123584, 1164727, 1164728 and 1138457. Reorder from Lexington using same part numbers. Debit Memo scrap to OPHQ Acct. 14-090-0421 and note this CEM as authorization.

IBM, "Executive", "Hektowriter", "IBM EXECUTARY", and "Selectric" are registered trademarks of the International Business Machines Corp.

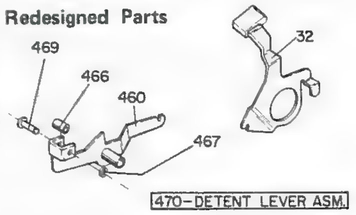
110 ENGINEERING CHANGE

Mech. Code 720

8-25-71

SUBJECT: 54 Tooth Index — Redesigned Parts

PURPOSE: The old style lever (Ref. 460) has been obsoleted. Order Ref. 470 and detent release lever (712-32) when replacing old style lever or roller.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
712	32	6518582	Detent Release Lever	.60
720	460	1204627	Lever	.65
	466	6512356	Roller	.25
	467	251989	Retainer	.04
	469	6512614	Pin	.04
	470	1147247	Detent Lever Assembly includes Ref. 460, 466, 467 & 469	1.10

MACHINES AFFECTED: Above 7X1-9444462, 7X3-9123921 and 7X5-9319263.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1141596. Debit Memo scrap to OPHQ Acct. 14-090-0421 and note this CEM as authorization.

111 ENGINEERING CHANGE

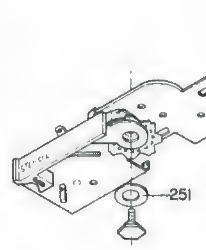
Mech. Code 714

8-25-71

SUBJECT: Stencil Lever — More Rigid

PURPOSE: The ribbon plate has been modified to prevent the stencil lever from slipping off the detent post.

SOLUTION: The spring washer (714-215) has been removed from the top of the stencil lever. A thicker washer has been added at the bottom of the stencil lever. This makes the stencil lever more rigid.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
714	251	1154416	Washer	.02

MACHINES AFFECTED: Above S/N 7X1-9445876, 7X3-9145175, and 7X5-9323432.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1175879. Debit Memo scrap to OPHQ Acct. 14-090-0421 and note this CEM as authorization.

112 ENGINEERING CHANGE

Mech. Code 702

9-8-71

SUBJECT: Tilt Detent Guide Screw — Shortened

PURPOSE: Provide clearance between tilt detent guide screw and typehead skirt.

SYMPTOM: Occasional malselection of tilt-3 characters caused by the screw binding against the typehead skirt. This may also appear as an escapement failure when using a repeat hyphen.

SOLUTION: Replace present screw with new level shorter screw.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
702	316	1147655	Screw	

MACHINES AFFECTED: Above 7X1-9453490, 7X3-9131240, 7X5-9329663 have short screw installed

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Code 32, Expires 9-15-72

PARTS INFORMATION: Order Lexington. Retain present level screw P/N 1124836 for use on other products.

113 SERVICE INFORMATION

9-8-71

SUBJECT: Publications — "Selectric" Typewriters

As of September 8, 1971 the following "Selectric" Typewriter publications have been released to the field. These manuals contain complete information on both "Selectric" and "Selectric" II Typewriters.

Form No.	Name	Price
241-5102-9	Parts Catalog — "Selectric" and "Selectric" II Typewriter	.50
241-5103-5	Part No./Price List	.25
241-5307-4	Pictorial Ref./Adj. Manual	.50
241-5615	Service Manual Supplement "Selectric" II Typewriter	1.55

THE FOLLOWING INFORMATION FOR IBM USE ONLY

For Product and Identification Codes see inside back cover of the Pict. Ref./Adj. Manual.

For call reporting the following codes apply to the "Selectric" II Typewriter.

Product Code 26
Identification:
1st Digit 8
2nd Digit 3 — Single Pitch
7 Dual Pitch
3rd Digit 3 — 11" Writing Line
5 — 13" Writing Line

114 SAFETY

9-13-71

SUBJECT: Bristol Wrenches, No. 2, 6 Flute, P/N 9900216 Used On Tilt Ring Pivot Pin Set Screws

SAFETY PRECAUTIONS: Some bristol wrenches have been reported to be brittle due to manufacturing defect. These wrenches may shatter when torque is applied.

SAFETY CORRECTIVE ACTION: When using these wrenches, precautions should be taken to prevent possible injury. A shop cloth should be placed over these wrenches when they are used. This will contain the wrench if it should shatter.

WEAR YOUR SAFETY GLASSES:

New stock is not available at this time. This CEM will be revised with replacement procedures, when quality wrenches are available.

106 SERVICE INFORMATION

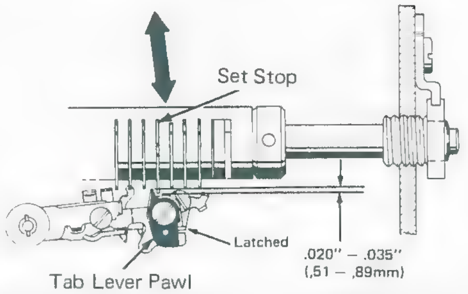
Mech. Code 718

6-16-71

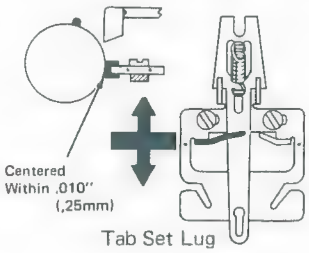
TAB STOPS CLEARING – FRICTION DETENT TAB RACKS

When experiencing self-clearing tabs, the following adjustments should be checked. **Preliminary Adjustment:** Adjust the tab rack rotationally so the tab lever pawl will contact the tab rack final stop.

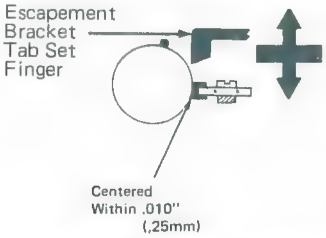
1. Tab lever pawl should be adjusted front-to-rear to engage a set tab stop .020" - .035".



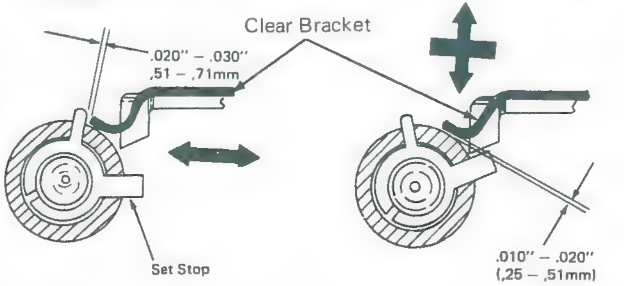
2. Tab set lug — form the lug so that when a tab stop is set, the tab lever pawl will contact the center of a set tab stop ±.010".



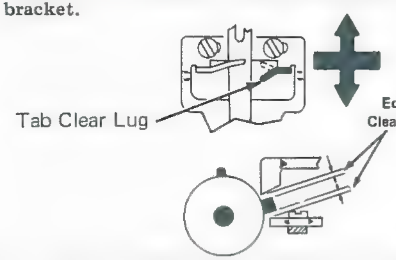
If the tab stops, located on either side of the tab stop that is being set, contact the underside of the tab clear bracket before the proper set position is obtained, the tab set finger at the rear of the escapement bracket should be formed down.



3. Tab clear bracket should be adjusted front-to-rear for .020"-.030" clearance with the clear lug of a set tab stop. The clear bracket should be formed up or down for .010"-.020" clearance with the tab rack.



4. Tab clear lug should be formed down so that when a tab stop is cleared and the tab rack is at rest, the clear tab stop is centered between the tab lever pawl and the tab set lug of the escapement bracket.



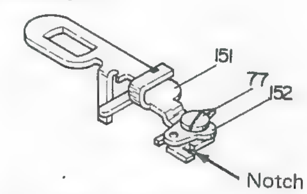
107 ENGINEERING CHANGE

Mech. Code 718

8-11-71

SUBJECT: Tab Lever And Tab Pawl – Redesigned

PURPOSE: A notch has been cut in the tab lever to provide both a latching surface for the tab latch and eliminate the need for a tab overthrow stop. The present tab overthrow stop will continue to be installed until a new clip for the dual velocity cable is released.



ADJUSTMENTS: Remain the same.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
718	77	1138802	Screw	.10
	151	1147651	Lever, Tab, Level 3	.30
	152	1147652	Pawl, Tab, Level 3	.05
	153	1287297	Tab Lever Assembly	.45

NOTE: Although Level 2 component parts remain available for use on other products, the new tab lever assembly may be replaced as a unit on "Selectric" Typewriters with Level 2 Parts.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Mfg. ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington.

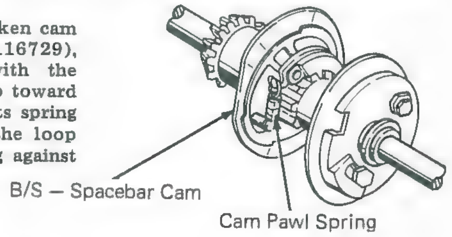
108 SERVICE INFORMATION

Mech. Code 717

8-11-71

SPACEBAR – BACKSPACE CAM SPRING – PROPER INSTALLATION

When replacing a broken cam pawl spring (P/N 1116729), install the spring with the open side of the loop toward the cam. This prevents spring breakage caused by the loop of the spring rubbing against the cam wheel.



109 SERVICE INFORMATION

Mech. Code 712

8-25-71

PLATEN KNOBS – LOOSE INSERTS

On some recent machines the platen knobs are coming loose from the insert. Replace knobs when this condition is found.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

On machines under warranty use Service Code 12.

On machines out of warranty, use Service Code 32. Expires 2-29-72.

Parts Information: Scrap existing stock of 1123584, 1164727, 1164728 and 1138457. Reorder from Lexington using same part numbers. Debit Memo scrap to OPHQ. Acct. 14-090-0421 and note this CEM as authorization.

IBM, "Executive", "Hektowriter", "IBM EXECUTARY", and "Selectric" are registered trademarks of the International Business Machines Corp.

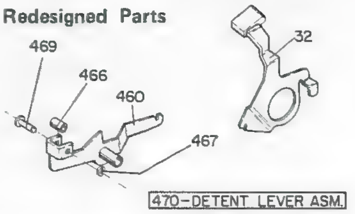
110 ENGINEERING CHANGE

Mech. Code 720

8-25-71

SUBJECT: 54 Tooth Index — Redesigned Parts

PURPOSE: The old style lever (Ref. 460) has been obsoleted. Order Ref. 470 and detent release lever (712-32) when replacing old style lever or roller.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
712	32	6518582	Detent Release Lever	.60
720	460	1204627	Lever	.65
	466	6512356	Roller	.25
	467	251989	Retainer	.04
	469	6512614	Pin	.04
	470	1147247	Detent Lever Assembly includes Ref. 460, 466, 467 & 469	1.10

MACHINES AFFECTED: Above 7X1-9444462, 7X3-9123921 and 7X5-9319263.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1141596. Debit Memo scrap to OPHQ Acct. 14-090-0421 and note this CEM as authorization.

111 ENGINEERING CHANGE

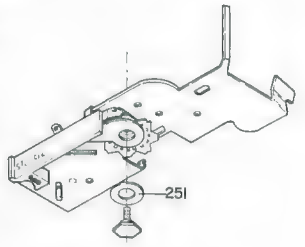
Mech. Code 714

8-25-71

SUBJECT: Stencil Lever — More Rigid

PURPOSE: The ribbon plate has been modified to prevent the stencil lever from slipping off the detent post.

SOLUTION: The spring washer (714-215) has been removed from the top of the stencil lever. A thicker washer has been added at the bottom of the stencil lever. This makes the stencil lever more rigid.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
714	251	1154416	Washer	.02

MACHINES AFFECTED: Above S/N 7X1-9445876, 7X3-9145175, and 7X5-9323432.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1175879. Debit Memo scrap to OPHQ Acct. 14-090-0421 and note this CEM as authorization.

112 ENGINEERING CHANGE

Mech. Code 702

9-8-71

SUBJECT: Tilt Detent Guide Screw — Shortened

PURPOSE: Provide clearance between tilt detent guide screw and typehead skirt.

SYMPTOM: Occasional malselection of tilt-3 characters caused by the screw binding against the typehead skirt. This may also appear as an escapement failure when using a repeat hyphen.

SOLUTION: Replace present screw with new level shorter screw.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
702	316	1147655	Screw	

MACHINES AFFECTED: Above 7X1-9453490, 7X3-9131240, 7X5-9329663 have short screw installed

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Code 32, Expires 9-15-72

PARTS INFORMATION: Order Lexington. Retain present level screw P/N 1124836 for use on other products.

113 SERVICE INFORMATION

9-8-71

SUBJECT: Publications — "Selectric" Typewriters

As of September 8, 1971 the following "Selectric" Typewriter publications have been released to the field. These manuals contain complete information on both "Selectric" and "Selectric" II Typewriters.

Form No.	Name	Price
241-5102-9	Parts Catalog — "Selectric" and "Selectric" II Typewriter	.50
241-5103-5	Part No./Price List	.25
241-5307-4	Pictorial Ref./Adj. Manual	.50
241-5615	Service Manual Supplement "Selectric" II Typewriter	1.55

NOTE: All orders for the "Selectric" II Typewriter Service Manual supplement must be ordered F/N 241-5615 (supplement). If the supplement is not specified, both the "Selectric" & "Selectric" II Typewriter Service Manuals will be sent and billed.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

For Product and Identification Codes see inside back cover of the Pict. Ref./Adj. Manual.

For call reporting the following codes apply to the "Selectric" II Typewriter.

Product Code 26
Identification:
1st Digit 8
2nd Digit 3 — Single Pitch
7 Dual Pitch
3rd Digit 3 — 11" Writing Line
5 — 13" Writing Line

114 SAFETY

9-13-71

SUBJECT: Bristol Wrenches, No. 2, 6 Flute, P/N 9900216 Used On Tilt Ring Pivot Pin Set Screws

SAFETY PRECAUTIONS: Some bristol wrenches have been reported to be brittle due to manufacturing defect. These wrenches may shatter when torque is applied.

SAFETY CORRECTIVE ACTION: When using these wrenches, precautions should be taken to prevent possible injury. A shop cloth should be placed over these wrenches when they are used. This will contain the wrench if it should shatter.

WEAR YOUR SAFETY GLASSES:

New stock is not available at this time. This CEM will be revised with replacement procedures, when quality wrenches are available.

115 ENGINEERING CHANGE

Mech. Code 749

9-22-71

SUBJECT: Pinfeed Platen — Pinwheel Set Screws

PURPOSE: A new style set screw with a knurled point is now available. This screw has improved locking characteristics.

SYMPTOM: Erratic line spacing and poor vertical alignment due to loose pin wheels.

SOLUTION: Install new style set screws.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
749	102	1164952	Screw Set	.10

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Code 32, Expires 9-22-72.

PARTS INFORMATION: Order Lexington.

116 SERVICE INFORMATION

Mech. Code 711

9-22-71

DRIVE BELT — SPECIAL APPLICATIONS

An improved drive belt has been released for use on the I/O. This drive belt may be used on "Selectric" Typewriters that are used for special applications (such as automatic operation).

NOTE: The acoustic level of the machine may be higher with this belt, therefore it is not recommended for general use. P/N 5173811

117 ENGINEERING CHANGE

Mech. Code 702

9-22-71

SUBJECT: Rotate Pulley — Tape Anchor Lifting Out Of Pulley

SYMPTOM: Possible malselection if the T-end of tape anchor rises and slips to the rear of the T-slot in the pulley. It is also possible that the tape anchor may come completely out of the pulley.

SOLUTION: Replace the pulley.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
702	420	1124196	Pulley, Rotate	1.85

MACHINES AFFECTED: 7X1 between 9431243 & 9457350; 7X3 between 9101802 & 9138259; 7X5 between 9295508 & 9332219.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Code 32, Expires 9-30-72.

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1124196. Reorder using same part number. Debit Memo scrap to OPHQ Acct. 14-090-0232 and note this CEM as authorization.

118 ENGINEERING CHANGE

Mech. Code 711

9-22-71

SUBJECT: Motor — 230V 60 Hz — Discontinued

PURPOSE: Machines formerly supplied with 230V 60 Hz motors will now be shipped with 220V 60 Hz motors.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
711	40	1287044	220V 60 Hz	*

*Price not available at time of printing.

NOTE: 230V 60 Hz motor is no longer available.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1141325 and reorder P/N 1287044. Debit memo scrap to OP HQ Acct. 14-090-0421 and note this CEM as authorization.

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117 ENGINEERING CHANGE

Mech. Code 702

9-22-71

SUBJECT: Rotate Pulley — Tape Anchor Lifting Out Of Pulley

SYMPTOM: Possible malselection if the T-end of tape anchor rises and slips to the rear of the T-slot in the pulley. It is also possible that the tape anchor may come completely out of the pulley.

SOLUTION: Replace the pulley.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
702	420	1124196	Pulley, Rotate	1.85

MACHINES AFFECTED: 7X1 between 9431243 & 9457350; 7X3 between 9101802 & 9138259; 7X5 between 9295508 & 9332219.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Code 32, Expires 9-30-72.

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1124196. Reorder using same part number. Debit Memo scrap to OPHQ Acct. 14-090-0232 and note this CEM as authorization.

118 ENGINEERING CHANGE

Mech. Code 711

9-22-71

SUBJECT: Motor — 230V 60 Hz — Discontinued

PURPOSE: Machines formerly supplied with 230V 60 Hz motors will now be shipped with 220V 60 Hz motors.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
711	40	1287044	220V 60 Hz	*

*Price not available at time of printing.

NOTE: 230V 60 Hz motor is no longer available.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1141325 and reorder P/N 1287044. Debit memo scrap to OP HQ Acct. 14-090-0421 and note this CEM as authorization.

119 ENGINEERING CHANGE

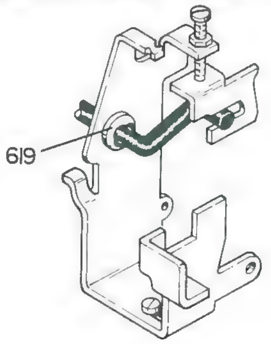
Mech. Code 703

10-6-71

SUBJECT: Carrier Return Clutch Latch Shaft Spacer — Dual Pitch

PURPOSE: A spacer is currently being added to the carrier return clutch latch shaft to maintain sufficient engagement of the shaft with the carrier return lever.

SOLUTION: If replacement of the shaft becomes necessary, check the amount of engagement of the shaft with the carrier return lever and add the spacer if necessary.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
703	619	1175211	Spacer, Dual Pitch	.01

MACHINES AFFECTED: Dual pitch above S/N 8X3-1004716, 8X5-2004053 have this spacer.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington.

120 ENGINEERING CHANGE

Mech. Code 715

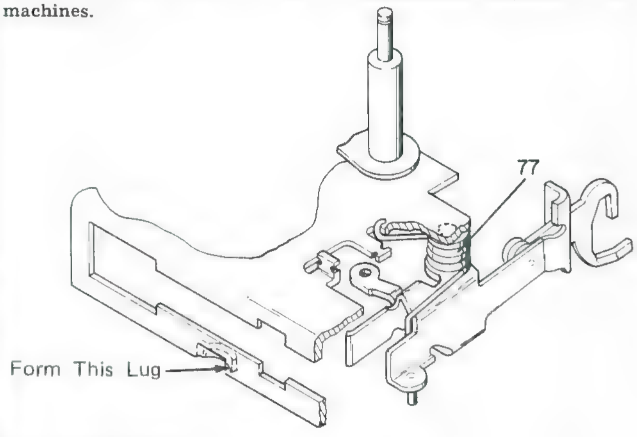
10-6-71

SUBJECT: Lift Control Lever Spring — Redesigned (Selective Ribbon)

PURPOSE: The ribbon lift control lever spring has been changed from an extension spring to a torsion spring to eliminate interference with the stencil lever.

SYMPTOM: Slight interference can cause the extension spring to unhook from the ribbon plate if the anchor lug is too far to the rear.

SOLUTION: If a disconnected spring is encountered, form the spring anchor lug on the ribbon plate so the spring loop cannot unhook. The new level spring should be used for replacement purposes on all level machines.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
715	77	1206702	Spring, Lift Cont.	.06

MACHINES AFFECTED: Above 8X3-1004733, 8X5-2004424 have new spring.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Mfg. ● Appl. 3 ● Code 32, Expires 9-8-72.

PARTS INFORMATION: Order Lexington.

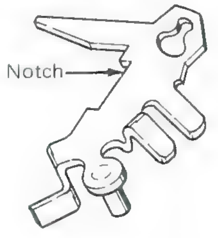
121 ENGINEERING CHANGE

Mech. Code 715

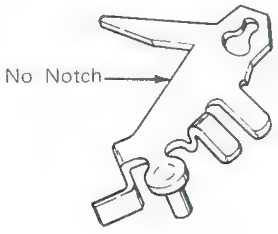
10-6-71

SUBJECT: Wobbler Bellcrank — Redesigned

PURPOSE: There is no longer a notch in the wobbler bellcrank because the retaining lug on the ribbon plate has been removed. The new level wobbler bellcrank will not work on the ribbon plate with the retaining lug.



LEVEL 1



LEVEL 2

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
715	62	1206688	Wobbler Bellcrank Level 1	.70
	62	1206618	Wobbler Bellcrank Level 2	.60

MACHINES AFFECTED: Above 8X3-1004083, 8X5-2004424 have this change.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Mfg. ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington. Old level wobbler bellcranks remain available for field use.

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122 ENGINEERING CHANGE

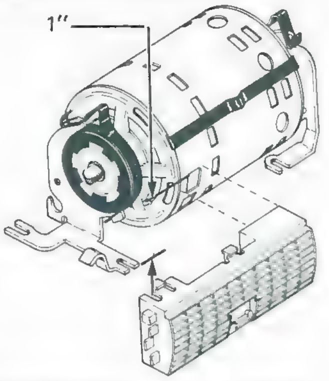
Mech. Code 711-704

10-6-71

SUBJECT: Motor And Vent Grill – Redesigned

PURPOSE: Some machines are being manufactured incorporating a new motor with the exhaust snout eliminated. This motor requires a redesigned vent grill for proper direction of motor heat.

ADJUSTMENTS: If removal or replacement of motor is necessary, rotate the motor so that the top of the upper exhaust port is 1 inch above the bottom of the motor bracket. This ensures that the heat from the motor will be directed out of the machine.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
711	40	1147650	Motor, Snoutless 115V 60 Hz	*

*Price not available at time of printing.

NOTE: Part Numbers for the new grill (704-80) remain the same. New grill is compatible on all machines with snap-off covers.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Mfg. ● Appl. 3 ● Use applicable ser. code

PARTS INFORMATION: Order Lexington. Scrap existing stock of grills, P/N's 1172113, 1164256, 1164257, and 1164258. Reorder using same part numbers. Debit Memo scrap to OP HQ Acct. 14-090-0421 and note this CEM as authorization.

106 SERVICE INFORMATION

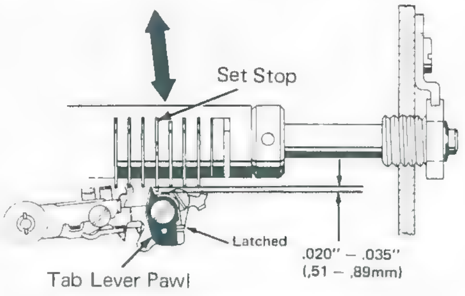
Mech. Code 718

6-16-71

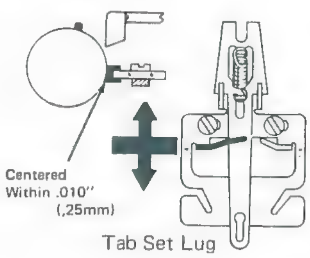
TAB STOPS CLEARING – FRICTION DETENT TAB RACKS

When experiencing self-clearing tabs, the following adjustments should be checked. **Preliminary Adjustment:** Adjust the tab rack rotationally so the tab lever pawl will contact the tab rack final stop.

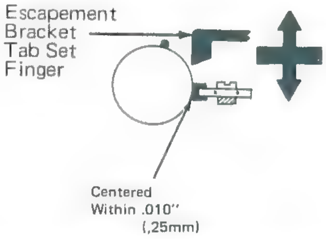
1. Tab lever pawl should be adjusted front-to-rear to engage a set tab stop .020" - .035".



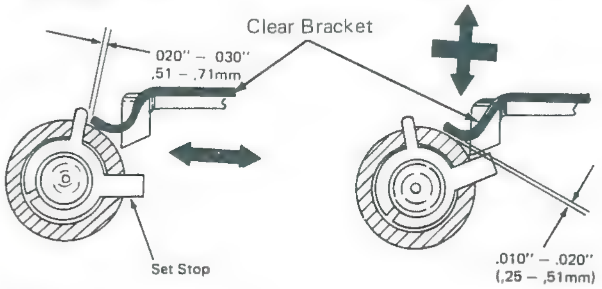
2. Tab set lug — form the lug so that when a tab stop is set, the tab lever pawl will contact the center of a set tab stop ±.010".



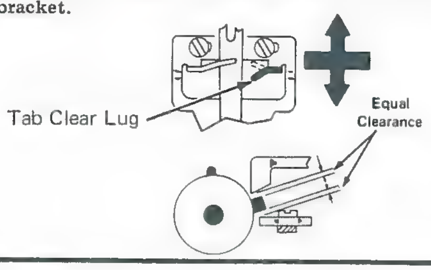
If the tab stops, located on either side of the tab stop that is being set, contact the underside of the tab clear bracket before the proper set position is obtained, the tab set finger at the rear of the escapement bracket should be formed down.



3. Tab clear bracket should be adjusted front-to-rear for .020"-.030" clearance with the clear lug of a set tab stop. The clear bracket should be formed up or down for .010"-.020" clearance with the tab rack.



4. Tab clear lug should be formed down so that when a tab stop is cleared and the tab rack is at rest, the clear tab stop is centered between the tab lever pawl and the tab set lug of the escapement bracket.



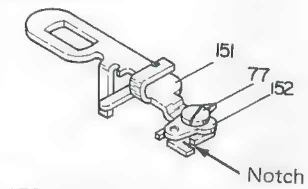
107 ENGINEERING CHANGE

Mech. Code 718

8-11-71

SUBJECT: Tab Lever And Tab Pawl – Redesigned

PURPOSE: A notch has been cut in the tab lever to provide both a latching surface for the tab latch and eliminate the need for a tab overthrow stop. The present tab overthrow stop will continue to be installed until a new clip for the dual velocity cable is released.



ADJUSTMENTS: Remain the same.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
718	77	1138802	Screw	.10
	151	1147651	Lever, Tab, Level 3	.30
	152	1147652	Pawl, Tab, Level 3	.05
	153	1287297	Tab Lever Assembly	.45

NOTE: Although Level 2 component parts remain available for use on other products, the new tab lever assembly may be replaced as a unit on "Selectric" Typewriters with Level 2 Parts.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Mfg. ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington.

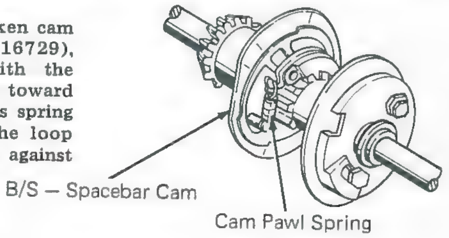
108 SERVICE INFORMATION

Mech. Code 717

8-11-71

SPACEBAR – BACKSPACE CAM SPRING – PROPER INSTALLATION

When replacing a broken cam pawl spring (P/N 1116729), install the spring with the open side of the loop toward the cam. This prevents spring breakage caused by the loop of the spring rubbing against the cam wheel.



109 SERVICE INFORMATION

Mech. Code 712

8-25-71

PLATEN KNOBS – LOOSE INSERTS

On some recent machines the platen knobs are coming loose from the insert. Replace knobs when this condition is found.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

On machines under warranty use Service Code 12.

On machines out of warranty, use Service Code 32. Expires 2-29-72.

Parts Information: Scrap existing stock of 1123584, 1164727, 1164728 and 1138457. Reorder from Lexington using same part numbers. Debit Memo scrap to OPHQ Acct. 14-090-0421 and note this CEM as authorization.

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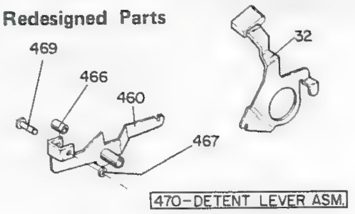
110 ENGINEERING CHANGE

Mech. Code 720

8-25-71

SUBJECT: 54 Tooth Index — Redesigned Parts



PURPOSE: The old style lever (Ref. 460) has been obsoleted. Order Ref. 470 and detent release lever (712-32) when replacing old style lever or roller.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
712	32	6518582	Detent Release Lever	.60
720	460	1204627	Lever	.65
	466	6512356	Roller	.25
	467	251989	Retainer	.04
	469	6512614	Pin	.04
	470	1147247	Detent Lever Assembly includes Ref. 460, 466, 467 & 469	1.10

MACHINES AFFECTED: Above 7X1-9444462, 7X3-9123921 and 7X5-9319263.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Use applicable ser. code.

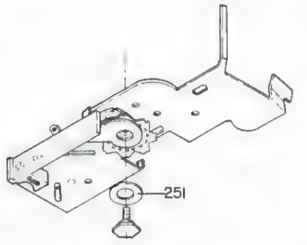
PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1141596. Debit Memo scrap to OPHQ Acct. 14-090-0421 and note this CEM as authorization.

111 ENGINEERING CHANGE

Mech. Code 714

8-25-71

SUBJECT: Stencil Lever — More Rigid



PURPOSE: The ribbon plate has been modified to prevent the stencil lever from slipping off the detent post.

SOLUTION: The spring washer (714-215) has been removed from the top of the stencil lever. A thicker washer has been added at the bottom of the stencil lever. This makes the stencil lever more rigid.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
714	251	1154416	Washer	.02

MACHINES AFFECTED: Above S/N 7X1-9445876, 7X3-9145175, and 7X5-9323432.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1175879. Debit Memo scrap to OPHQ Acct. 14-090-0421 and note this CEM as authorization.

112 ENGINEERING CHANGE

Mech. Code 702

9-8-71

SUBJECT: Tilt Detent Guide Screw — Shortened

PURPOSE: Provide clearance between tilt detent guide screw and typehead skirt.

SYMPTOM: Occasional malselection of tilt-3 characters caused by the screw binding against the typehead skirt. This may also appear as an escapement failure when using a repeat hyphen.

SOLUTION: Replace present screw with new level shorter screw.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
702	316	1147655	Screw	

MACHINES AFFECTED: Above 7X1-9453490, 7X3-9131240, 7X5-9329663 have short screw installed

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Code 32, Expires 9-15-72

PARTS INFORMATION: Order Lexington. Retain present level screw P/N 1124836 for use on other products.

113 SERVICE INFORMATION

9-8-71

(Revised) 10-20-71

SUBJECT: Publications — "Selectric" Typewriters

As of September 8, 1971 the following "Selectric" Typewriter publications have been released to the field. These manuals contain complete information on both "Selectric" and "Selectric" II Typewriters.

Form No.	Name	Price
241-5102-9	Parts Catalog — "Selectric" and "Selectric" II Typewriter	.50
241-5103-5	Part No./Price List	.25
241-5307-4	Pictorial Ref./Adj. Manual	.50
241-5615	Service Manual Supplement "Selectric" II Typewriter	1.50

NOTE: All orders for the "Selectric" II Typewriter Service Manual supplement must be ordered F/N 241-5615 (supplement). If the supplement is not specified, both the "Selectric" & "Selectric" II Typewriter Service Manuals will be sent and billed.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

For Product and Identification Codes see inside back cover of the Pict. Ref./Adj. Manual.

For call reporting the following codes apply to the "Selectric" II Typewriter.

Product Code 26
Identification:
 1st Digit 8
 2nd Digit 3 — Single Pitch
  7 Dual Pitch
 3rd Digit 3 — 11" Writing Line
  5 — 13" Writing Line

114 SAFETY

9-13-71

SUBJECT: Bristol Wrenches, No. 2, 6 Flute, P/N 9900216 Used On Tilt Ring Pivot Pin Set Screws

SAFETY PRECAUTIONS: Some bristol wrenches have been reported to be brittle due to manufacturing defect. These wrenches may shatter when torque is applied.

SAFETY CORRECTIVE ACTION: When using these wrenches, precautions should be taken to prevent possible injury. A shop cloth should be placed over these wrenches when they are used. This will contain the wrench if it should shatter.

WEAR YOUR SAFETY GLASSES:

New stock is not available at this time. This CEM will be revised with replacement procedures, when quality wrenches are available.

115 ENGINEERING CHANGE

Mech. Code 749

9-22-71

SUBJECT: Pinfeed Platen — Pinwheel Set Screws

PURPOSE: A new style set screw with a knurled point is now available. This screw has improved locking characteristics.

SYMPTOM: Erratic line spacing and poor vertical alignment due to loose pin wheels.

SOLUTION: Install new style set screws.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
749	102	1164952	Screw Set	.10

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Code 32, Expires 9-22-72.

PARTS INFORMATION: Order Lexington.

116 SERVICE INFORMATION

Mech. Code 711

9-22-71

DRIVE BELT — SPECIAL APPLICATIONS

An improved drive belt has been released for use on the I/O. This drive belt may be used on "Selectric" Typewriters that are used for special applications (such as automatic operation).

NOTE: The acoustic level of the machine may be higher with this belt, therefore it is not recommended for general use. P/N 5173811

117 ENGINEERING CHANGE

Mech. Code 702 — 9-22-71

SUBJECT: Rotate Pulley – Tape Anchor Lifting Out Of Pulley

SYMPTOM: Possible malselection if the T-end of tape anchor rises and slips to the rear of the T-slot in the pulley. It is also possible that the tape anchor may come completely out of the pulley.

SOLUTION: Replace the pulley.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
702	420	1124196	Pulley, Rotate	1.85

MACHINES AFFECTED: 7X1 between 9431243 & 9457350; 7X3 between 9101802 & 9138259; 7X5 between 9295508 & 9332219.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Code 32, Expires 9-30-72.

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1124196. Reorder using same part number. Debit Memo scrap to OPHQ Acct. 14-090-0232 and note this CEM as authorization.

118 ENGINEERING CHANGE

Mech. Code 711 — 9-22-71

SUBJECT: Motor – 230V 60 Hz – Discontinued

PURPOSE: Machines formerly supplied with 230V 60 Hz motors will now be shipped with 220V 60 Hz motors.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
711	40	1287044	220V 60 Hz	*

*Price not available at time of printing.

NOTE: 230V 60 Hz motor is no longer available.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1141325 and reorder P/N 1287044. Debit memo scrap to OP HQ Acct. 14-090-0421 and note this CEM as authorization.

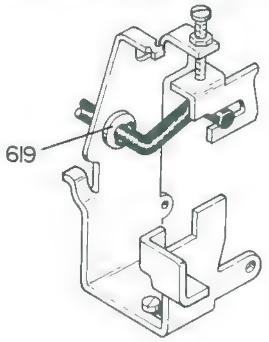
119 ENGINEERING CHANGE

Mech. Code 703 — 10-6-71

SUBJECT: Carrier Return Clutch Latch Shaft Spacer – Dual Pitch

PURPOSE: A spacer is currently being added to the carrier return clutch latch shaft to maintain sufficient engagement of the shaft with the carrier return lever.

SOLUTION: If replacement of the shaft becomes necessary, check the amount of engagement of the shaft with the carrier return lever and add the spacer if necessary.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
703	619	1175211	Spacer, Dual Pitch	.01

MACHINES AFFECTED: Dual pitch above S/N 8X3-1004716, 8X5-2004053 have this spacer.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington.

120 ENGINEERING CHANGE

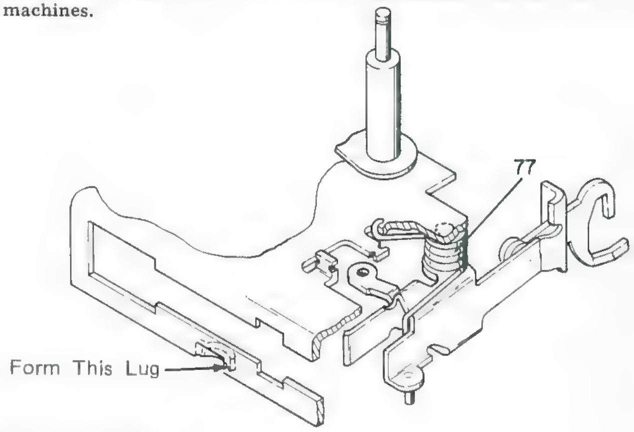
Mech. Code 715 — 10-6-71

SUBJECT: Lift Control Lever Spring – Redesigned (Selective Ribbon)

PURPOSE: The ribbon lift control lever spring has been changed from an extension spring to a torsion spring to eliminate interference with the stencil lever.

SYMPTOM: Slight interference can cause the extension spring to unhook from the ribbon plate if the anchor lug is too far to the rear.

SOLUTION: If a disconnected spring is encountered, form the spring anchor lug on the ribbon plate so the spring loop cannot unhook. The new level spring should be used for replacement purposes on all level machines.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
715	77	1206702	Spring, Lift Cont.	.06

MACHINES AFFECTED: Above 8X3-1004733, 8X5-2004424 have new spring.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Mfg. ● Appl. 3 ● Code 32, Expires 9-8-72.

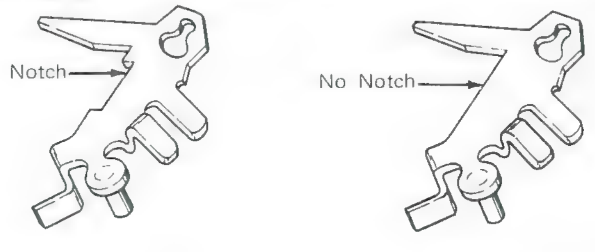
PARTS INFORMATION: Order Lexington.

121 ENGINEERING CHANGE

Mech. Code 715 — 10-6-71

SUBJECT: Wobbler Bellcrank – Redesigned

PURPOSE: There is no longer a notch in the wobbler bellcrank because the retaining lug on the ribbon plate has been removed. The new level wobbler bellcrank will not work on the ribbon plate with the retaining lug.



LEVEL 1 LEVEL 2

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
715	62	1206688	Wobbler Bellcrank Level 1	.70
	62	1206618	Wobbler Bellcrank Level 2	.60

MACHINES AFFECTED: Above 8X3-1004083, 8X5-2004424 have this change.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Mfg. ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington. Old level wobbler bellcranks remain available for field use.

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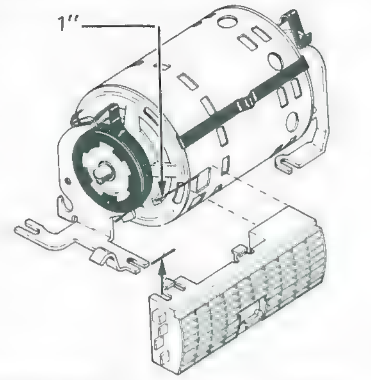
122 ENGINEERING CHANGE

Mech. Code 711-704 10-6-71

SUBJECT: Motor And Vent Grill — Redesigned

PURPOSE: Some machines are being manufactured incorporating a new motor with the exhaust snout eliminated. This motor requires a redesigned vent grill for proper direction of motor heat.

ADJUSTMENTS: If removal or replacement of motor is necessary, rotate the motor so that the top of the upper exhaust port is 1 inch above the bottom of the motor bracket. This ensures that the heat from the motor will be directed out of the machine.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
711	40	1147650	Motor, Snoutless 115V 60 Hz	*

*Price not available at time of printing.

NOTE: Part Numbers for the new grill (704-80) remain the same. New grill is compatible on all machines with snap-off covers.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Mfg. ● Appl. 3 ● Use applicable ser. code

PARTS INFORMATION: Order Lexington. Scrap existing stock of grills, P/N's 1172113, 1164256, 1164257, and 1164258. Reorder using same part numbers. Debit Memo scrap to OP HQ Acct. 14-090-0421 and note this CEM as authorization.

123 SERVICE INFORMATION

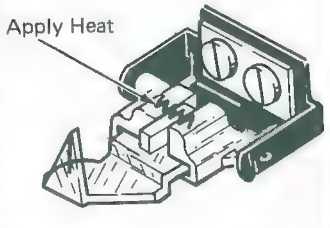
Mech. Code 710 10-20-71

CARRIER INDICATOR — "SELECTRIC" II

On some early "Selectric" II Typewriters the carrier indicator may be loose.

The indicator should be adjusted to just clear the margin scale when opening or closing the top cover.

After adjusting, touch the area shown with a soldering iron or heated paper clip to prevent movement and/or loss of the indicator.



124 ENGINEERING CHANGE

Mech. Code 716 10-20-71

SUBJECT: Shift Detent Stud — Replacement Part

PURPOSE: A special 8/32" threaded shift detent stud is now available. This stud should only be used if the side frame hole is stripped. The side frame hole must be retapped with an 8/32" tap to accept this stud.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
716	210	1287365	Stud	*

*Price not available at time of printing

MACHINES AFFECTED: Above 7X1-5803763; 7X3-5247000; 7X5-5596590. Below this range use replacement stud P/N 1269083.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Serviceability ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington.

125 SERVICE INFORMATION

Mech. Code 715

RIBBON LIFT FAILURES — SELECTIVE RIBBON

Intermittent ribbon lift failures during underscoring can possibly be caused by improper print shaft timing.

If experiencing this problem, ensure the print shaft is timed within specification.

126 ENGINEERING CHANGE

Mech. Code 712 10-20-71

SUBJECT: Platen Bushing — Binding

PURPOSE: Platens have reached the field with oversized LH end plugs. This causes the LH bushing to bind.

SOLUTION An oversized bushing is available as a solution for this problem and should only be used on platens where the left bushing is binding.

The oversized bushing may be identified by a dull gray finish. The standard bushing is a bright finish.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
712	14	1287366	Bushing — Oversize 7X1, 7X3	.20
	14	1287367	Bushing — Oversize 7X5	.20

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● Appl. 3 ● Code 32, Expires December 1, 1972.

PARTS INFORMATION: Order Lexington.

127 ENGINEERING CHANGE

Mech. Code 720-722 10-20-72

SUBJECT: Paper Feed Assembly — Redesigned

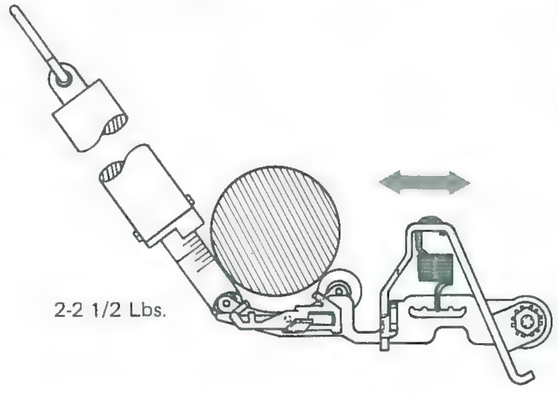
PURPOSE: Some Model 7X3 "Selectric" Typewriters are being manufactured with a redesigned paper feed assembly.

SOLUTION: The complete paper feed assembly can be removed in the following manner:

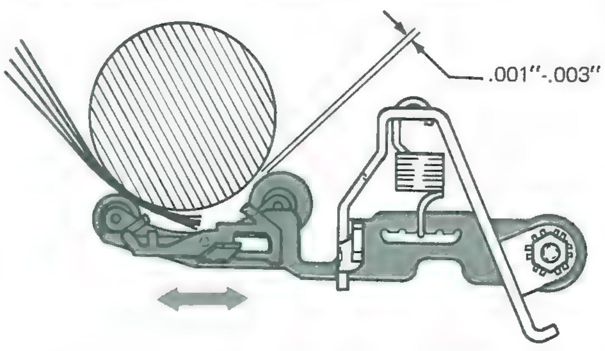
1. Remove the platen ratchet detent.
2. Remove the index link from the index pawl, without disturbing its adjustment.
3. Disconnect both anchor springs (Mech. 722, Ref. 261 & 264). These springs connect the paper feed assembly to the power frame.
4. Scribe the position of the multiple copy control detent plate, then loosen its mounting screw.
5. Lift the paper feed assembly at the rear; pull towards the rear of the machine and remove from the machine.

Adjustments:

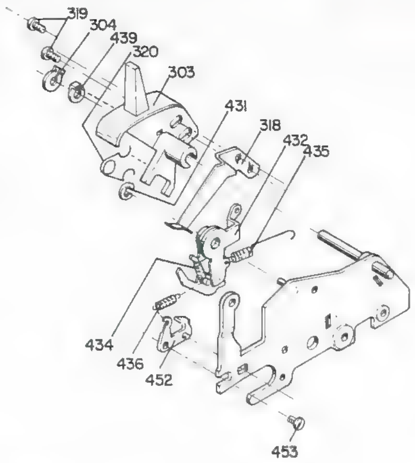
1. Place the feed roll tension springs in the notch that will provide 2 - 2 1/2 lbs tension when measured at the front feed roll pivots.



2. Adj. the feed roll mounting bracket front-to-rear so a clearance of .001-.003 exists between the rear feed roll and the platen with 4 tab cards (.028"-.030") between the platen and all the front feed rolls. With the cards removed there should be no clearance.

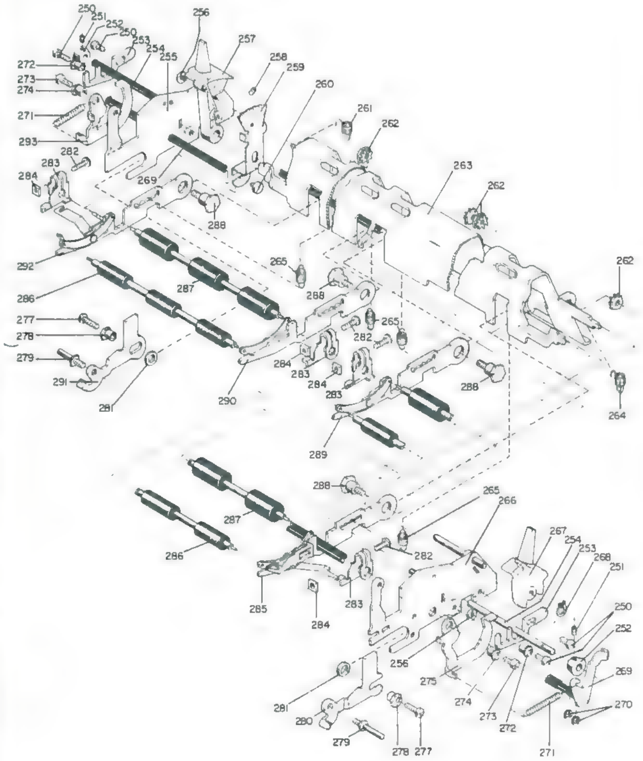


(CEM No. 127 Cont'd 10-20-71)



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
720	303	1147561	Index Selector Lever	1.20
	304	1115633	Grip Ring Retainer	.04
	319	1141776	Screw	.02
	320	1124396	Spring	.06
	318	1128076	Lever 27T	.20
	431	264641	Retainer	.04
	432	1128018	Pawl Index	1.35
	434	1107795	Spring	.02
	435	1175330	Spring	.10
	436	1133668	Spring	.04
	439	1147587	Clip Index Selection	.03
	452	1147565	Stop	.30
	453	63324	Screw	.05



MECH.	REF.	PART NO.	DESCRIPTION	PRICE
722	250	1175237	Screw Front	.02
	250	1115736	Screw Rear	.02
	251	1117176	Set Screw	.05
	252	1175236	Eccentric	.10
	253	1124369	Plate	.05
	254	1138076	Copy Control Shaft, 7X3	1.35
	255	1147599	Plate LH	.55
	256	1147588	Retainer	.03
	257	1147562	Multiple Copy Control Lever	1.20
	258	1175102	Set Screw	.04
	259	1124383	Detent Plate	.15
	260	1117759	Screw	.02
	261	1175266	Spring	.10
	262	1123934	Nut	.05
	263	1147558	Frame, 7X3	3.00
	264	1175266	Spring	.10
	265	1147597	Spring	.07
	266	1147618	Plate RH	.90
	267	1147560	Feed Roll Release Lever	.85
	268	1115633	Grip Ring	.04
	269	1164543	Shaft, Feed Roll Release	.85
	270	1103695	Clip	.02
	271	1134837	Spring LH	.04
	271	1138996	Spring RH	.05
	272	1124370	Eccentric	.10
	273	38348	Screw	.03
	274	1124803	Eccentric, Platen Latch	.10
	275	1147584	RH Platen Latch	.20
	277	38353	Screw	.03
	278	1124378	Eccentric	.10
	279	1132055	Stud, Boil Mounting	.15
	280	1147590	Bracket RH	.25
	281	1124377	Spacer	.05
	282	1128280	Screw	.10
	283	1147591	Feed Roll Lever RH	.10
	283	1147592	Feed Roll Lever LH	.10
	284	1134829	Nut	.02
	285	1147570	Bracket Asm.	1.10
	286	1147579	Feed Roll Front 7X3	2.25
	287	1138080	Feed Roll Rear 7X3	2.25
	288	1147586	Stud	.10
	289	1147571	Bracket Asm.	1.20
	290	1147572	Bracket Asm.	1.20
	291	1147589	Bracket RH	.25
	292	1147573	Bracket Asm.	1.10
	293	1124802	LH Platen Latch	.15

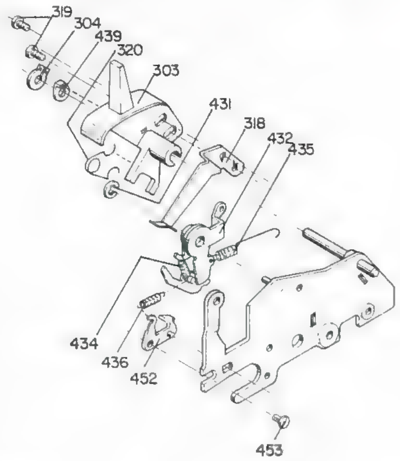
THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Serviceability ● Application 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington.

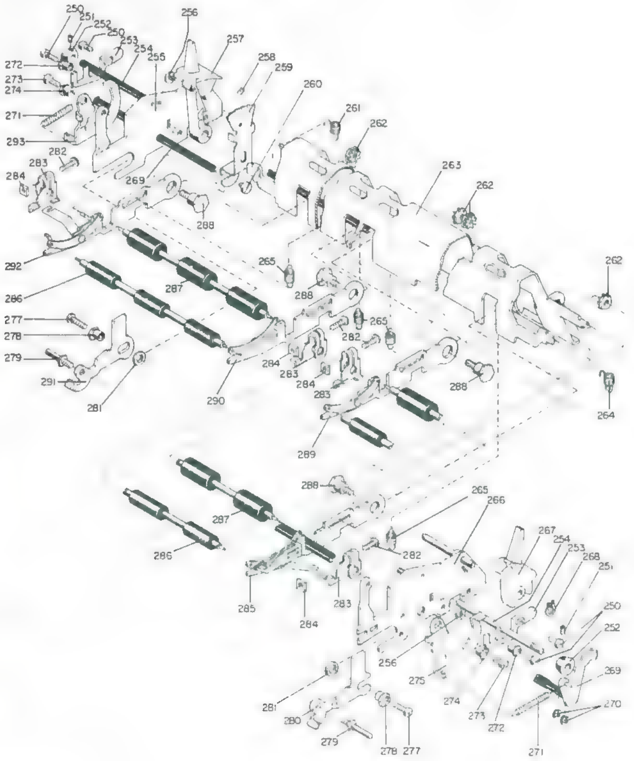
IBM, "Executive", "Hektowriter", "IBM EXECUTARY", and "Selectric" are registered trademarks of the International Business Machines Corp.

(CEM No. 127 Cont'd 10-20-71)



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
720	303	1147561	Index Selector Lever	1.20
	304	1115633	Grip Ring Retainer	.04
	319	1141776	Screw	.02
	320	1124396	Spring	.06
	318	1128076	Lever 27T	.20
	431	264641	Retainer	.04
	432	1128018	Pawl Index	1.35
	434	1107795	Spring	.02
	435	1175330	Spring	.10
	436	1133668	Spring	.04
	439	1147587	Clip Index Selection	.03
	452	1147565	Stop	.30
	453	63324	Screw	.05



MECH.	REF.	PART NO.	DESCRIPTION	PRICE
722	250	1175237	Screw Front	.02
	250	1115736	Screw Rear	.02
	251	1117176	Set Screw	.05
	252	1175236	Eccentric	.10
	253	1124369	Plate	.05
	254	1138076	Copy Control Shaft, 7X3	1.35
	255	1147599	Plate LH	.55
	256	1147588	Retainer	.03
	257	1147562	Multiple Copy Control Lever	1.20
	258	1175102	Set Screw	.04
	259	1124383	Detent Plate	.15
	260	1117759	Screw	.02
	261	1175266	Spring	.10
	262	1123934	Nut	.05
	263	1147558	Frame, 7X3	3.00
	264	1175266	Spring	.10
	265	1147597	Spring	.07
	266	1147618	Plate RH	.90
	267	1147560	Feed Roll Release Lever	.85
	268	1115633	Grip Ring	.04
	269	1164543	Shaft, Feed Roll Release	.85
	270	1103695	Clip	.02
	271	1134837	Spring LH	.04
	271	1138996	Spring RH	.05
	272	1124370	Eccentric	.10
	273	38348	Screw	.03
	274	1124803	Eccentric, Platen Latch	.10
	275	1147584	RH Platen Latch	.20
	277	38353	Screw	.03
	278	1124378	Eccentric	.10
	279	1132055	Stud, Boil Mounting	.15
	280	1147590	Bracket RH	.25
	281	1124377	Spacer	.05
	282	1128280	Screw	.10
	283	1147591	Feed Roll Lever RH	.10
	283	1147592	Feed Roll Lever LH	.10
	284	1134829	Nut	.02
	285	1147570	Bracket Asm.	1.10
	286	1147579	Feed Roll Front 7X3	2.25
	287	1138080	Feed Roll Rear 7X3	2.25
	288	1147586	Stud	.10
	289	1147571	Bracket Asm.	1.20
	290	1147572	Bracket Asm.	1.20
	291	1147589	Bracket RH	.25
	292	1147573	Bracket Asm.	1.10
	293	1124802	LH Platen Latch	.15

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Serviceability ● Application 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington.

⑫⑧ ENGINEERING CHANGE

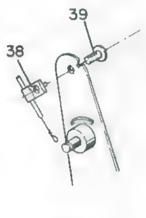
Mech. Code 724

11-3-71

SUBJECT: Backspace Cable Clamp — Redesigned

PURPOSE: The cable clamp on the mainspring backplate has been redesigned to facilitate adjustment.

The old level clamp and screw are no longer available. If replacing either of these parts on machines prior to this change, replace both parts. It will be necessary to carefully break the locating lug from the clamp on early level machines.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
724	38	1141805	Clamp, Cable	.05
	39	1141771	Screw, Clamp	.02

MACHINES AFFECTED: Above 873 — 1006061 & 875 — 2005573 have this change.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Serviceability ● Appl. 3 ● Use applicable ser. code.

PARTS INFORMATION: Order Lexington.

IBM, "Executive", "Hektowriter", "IBM EXECUTARY", and "Selectric" are registered trademarks of the International Business Machines Corp.

129 ENGINEERING CHANGE

Mech. Code 715

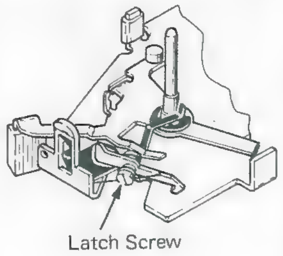
11-3-71

SUBJECT: Ribbon Load Lever Latch Screw — Loose — Model 8XX

PURPOSE: Some early "Selectric" II Typewriters may have been manufactured with the load lever latch screw loose.

SOLUTION: Ensure the load lever latch screw is tight and no binds exist in the load lever latch.

CAUTION: Overtightening can cause the C-clip (Ref. 67) to become distorted and create a bind in the load lever latch. Rotate or replace the C-clip (available in parts packet) to solve the problem.



MACHINES AFFECTED: After S/N 8X3—1010922; 8X5—2008840 have been checked for this condition.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Mfg ● Appl. 3 ● Code 32, Expires 12-8-72

130 ENGINEERING CHANGE

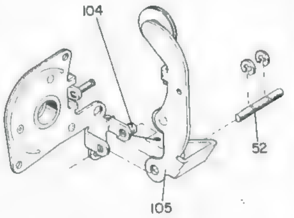
Mech. Code 716

11-3-71

SUBJECT: Shift Arm — Redesigned

PURPOSE: The new arm is stronger and allows the rotate tape to be removed from the shift pulley without disconnecting it from the carrier.

SOLUTION: The two piece stamped shift arm is no longer available. To replace with new arm order B/M which contains Ref. 104, 105, 52 and 2 C-clips. To replace the 2 piece stamped arm used with the shift sensing mechanism, parts must be ordered separately.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
716	52	1147392	Shaft, Arm Mount	.25
	104	1147396	Spring, Arm	.06
	105	1147397	Arm, Shift	2.10
	300	1287396	B/M Shift Arm Incl. Ref. 52, 104 & 105	2.50
741	31	1147399	Arm, Shift Sensing	3.75

MACHINES AFFECTED: 8X3 — 1012229, 8X5 — 2010237, 7X1 — 9460190, 7X3 — 9142295, 7X5 — 9335721.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Serviceability ● Appl. 3 ● Use applicable ser. code

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1175258 and 1174272 after ordering and receiving P/N 1147392, 1147397 and 1287396. Debit Memo scrap to OP HQ Acct. 14-090-0421 and note this CEM as authorization.

131 ENGINEERING CHANGE

Mech. Code 719

11-3-71

SUBJECT: Tab, Dual Pitch — Redesigned Parts — Model 87X

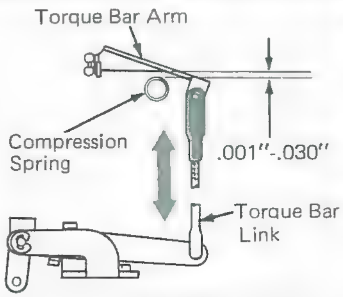
PURPOSE: The torque bar actuating linkage has been redesigned to improve tab touch. The tab keylever down stop has been eliminated.

SYMPTOM: On some early dual pitch "Selectric" II Typewriters the tab touch may be heavy or "spongy". The operator may complain of intermittent tab failures if the tab keybutton is not hit hard.

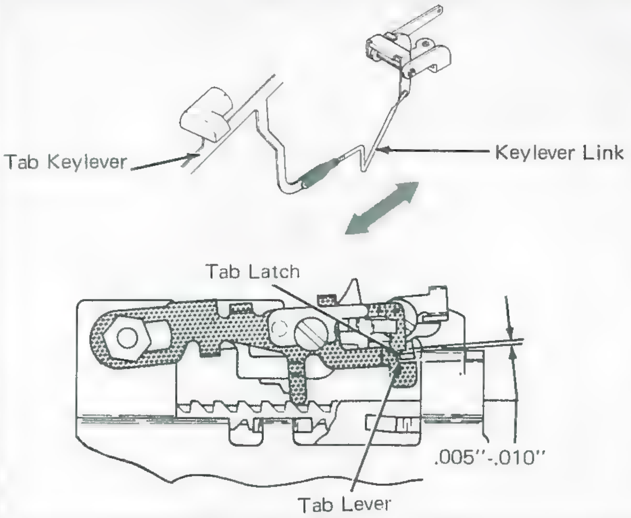
SOLUTION: Install the tab linkage B/M only if experiencing this problem.

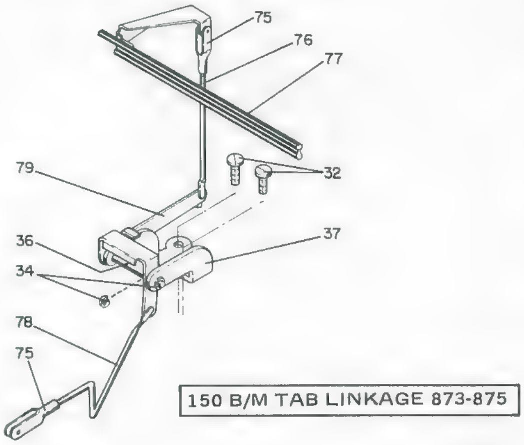
ADJUSTMENTS

1. Tab Torque Bar Link — Disconnect the tab keylever link. Adjust the tab torque bar link so the torque bar arm clears the tab rack compression spring by .001"-.030" at rest.



2. Tab Keylever Link — Adjust the tab keylever link so that when the tab keylever is bottomed, the tab lever overthrows the tab latch by .005"-.010".





PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
719	32	1164577	Screw	.01
	34	1073418	C-Clip	.01
	36	1138065	Shaft, 8X3	.05
	36	1128039	Shaft, 8X5	.10
	37	1138059	Bracket, 8X3	.20
	37	1128033	Bracket, 8X5	.20
	75	1110529	Clevis	.15
	76	1204245	Link, Torque Bar	.20
	77	1204666	Torque Bar, Tab 873	2.50
	77	1204667	Torque Bar, Tab 875	2.50
	78	1205344	Link, Keylever	.35
	79	1205341	Bellcrank, 873	.65
	79	1205342	Bellcrank, 875	.65
	150	1287368	B/M, Tab Linkage 873	4.35
	150	1287369	B/M, Tab Linkage 875	4.40

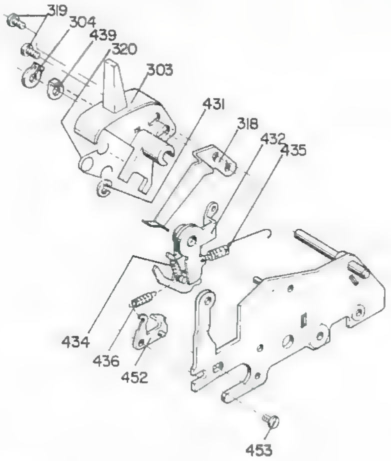
MACHINES AFFECTED: Above 873 — 1012229 & 875 — 2010237 have this change.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Reliability ● Appl. 3 ● Code 32, Expires 10-1-72

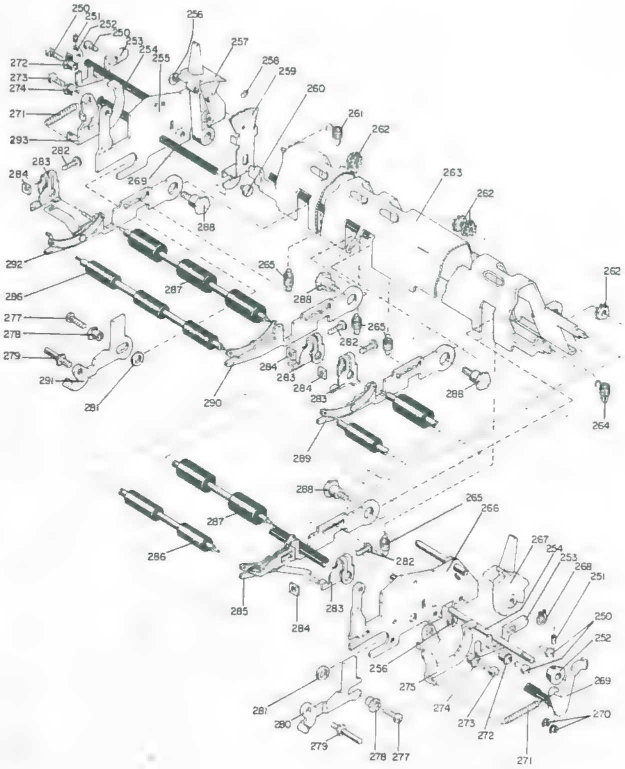
PARTS INFORMATION: Order Lexington.

(CEM No. 127 Cont'd 10-20-71)



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
720	303	1147561	Index Selector Lever	1.20
	304	1115633	Grip Ring Retainer	.04
	319	1141776	Screw	.02
	320	1124396	Spring	.06
	318	1128076	Lever 27T	.20
	431	264641	Retainer	.04
	432	1128018	Pawl Index	1.35
	434	1107795	Spring	.02
	435	1175330	Spring	.10
	436	1133668	Spring	.04
	439	1147587	Clip Index Selection	.03
	452	1147565	Stop	.30
	453	63324	Screw	.05
RH platen bushing — A frame paper feed				
712	22	1147581	Bushing RH 7X1—X3	.35
	22	1147582	Bushing RH X5	.35
749	115	1147600	Bushing RH Pinfeed All	1.00



MECH.	REF.	PART NO.	DESCRIPTION	PRICE
722	250	1175237	Screw Front	.02
	250	1115736	Screw Rear	.02
	251	1117176	Set Screw	.05
	252	1175236	Eccentric	.10
	253	1124369	Plate	.05
	254	1138076	Copy Control Shaft, 7X3	1.35
	255	1147599	Plate LH	.55
	256	1147588	Retainer	.03
	257	1147562	Multiple Copy Control Lever	1.20
	258	1175102	Set Screw	.04
	259	1124383	Detent Plate	.15
	260	1117759	Screw	.02
	261	1175266	Spring	.10
	262	1123934	Nut	.05
	263	1147558	Frame, 7X3	3.00
	264	1175266	Spring	.10
	265	1147597	Spring	.07
	266	1147618	Plate RH	.90
	267	1147560	Feed Roll Release Lever	.85
	268	1115633	Grip Ring	.04
	269	1164543	Shaft, Feed Roll Release	.85
	270	1103695	Clip	.02
	271	1134837	Spring LH	.04
	271	1138996	Spring RH	.05
	272	1124370	Eccentric	.10
	273	38348	Screw	.03
	274	1124803	Eccentric, Platen Latch	.10
	275	1147584	RH Platen Latch	.20
	277	38353	Screw	.03
	278	1124378	Eccentric	.10
	279	1132055	Stud, Boil Mounting	.15
	280	1147590	Bracket RH	.25
	281	1124377	Spacer	.05
	282	1128280	Screw	.10
	283	1147591	Feed Roll Lever RH	.10
	283	1147592	Feed Roll Lever LH	.10
	284	1134829	Nut	.02
	285	1147570	Bracket Asm.	1.10
	286	1147579	Feed Roll Front 7X3	2.25
	287	1138080	Feed Roll Rear 7X3	2.25
	288	1147586	Stud	.10
	289	1147571	Bracket Asm.	1.20
	290	1147572	Bracket Asm.	1.20
	291	1147589	Bracket RH	.25
	292	1147573	Bracket Asm.	1.10
	293	1124802	LH Platen Latch	.15

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: *Serviceability ● Application 3 ● Use applicable ser. code.*

PARTS INFORMATION: *Order Lexington.*

128 ENGINEERING CHANGE

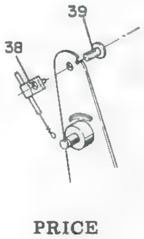
Mech. Code 724

11-3-71

SUBJECT: **Backspace Cable Clamp — Redesigned**

PURPOSE: The cable clamp on the mainspring backplate has been redesigned to facilitate adjustment.

The old level clamp and screw are no longer available. If replacing either of these parts on machines prior to this change, replace both parts. It will be necessary to carefully break the locating lug from the clamp on early level machines.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
724	38	1141805	Clamp, Cable	.05
	39	1141771	Screw, Clamp	.02

MACHINES AFFECTED: Above 873 — 1006061 & 875 — 2005573 have this change.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: *Serviceability ● Appl. 3 ● Use applicable ser. code.*

PARTS INFORMATION: *Order Lexington.*

IBM, "Executive", "Hektowriter", "IBM EXECUTARY", and "Selectric" are registered trademarks of the International Business Machines Corp.

129 ENGINEERING CHANGE

Mech. Code 715

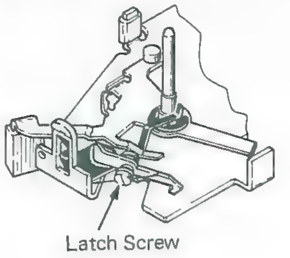
11-3-71

SUBJECT: Ribbon Load Lever Latch Screw — Loose — Model 8XX

PURPOSE: Some early "Selectric" II Typewriters may have been manufactured with the load lever latch screw loose.

SOLUTION: Ensure the load lever latch screw is tight and no binds exist in the load lever latch.

CAUTION: Overtightening can cause the C-clip (Ref. 67) to become distorted and create a bind in the load lever latch. Rotate or replace the C-clip (available in parts packet) to solve the problem.



MACHINES AFFECTED: After S/N 8X3—1010922; 8X5—2008840 have been checked for this condition.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Mfg ● Appl. 3 ● Code 32, Expires 12-8-72

130 ENGINEERING CHANGE

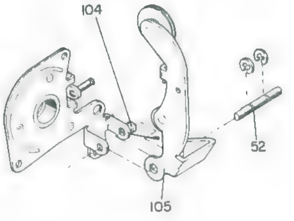
Mech. Code 716

11-3-71

SUBJECT: Shift Arm — Redesigned

PURPOSE: The new arm is stronger and allows the rotate tape to be removed from the shift pulley without disconnecting it from the carrier.

SOLUTION: The two piece stamped shift arm is no longer available. To replace with new arm order B/M which contains Ref. 104, 105, 52 and 2 C-clips. To replace the 2 piece stamped arm used with the shift sensing mechanism, parts must be ordered separately.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
716	52	1147392	Shaft, Arm Mount	.25
	104	1147396	Spring, Arm	.06
	105	1147397	Arm, Shift	2.10
	300	1287396	B/M Shift Arm Incl. Ref. 52, 104 & 105	2.50
741	31	1147399	Arm, Shift Sensing	3.75

MACHINES AFFECTED: 8X3 — 1012229, 8X5 — 2010237, 7X1 — 9460190, 7X3 — 9142295, 7X5 — 9335721.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Serviceability ● Appl. 3 ● Use applicable ser. code

PARTS INFORMATION: Order Lexington. Scrap existing stock of P/N 1175258 and 1174272 after ordering and receiving P/N 1147392, 1147397 and 1287396. Debit Memo scrap to OP HQ Acct. 14-090-0421 and note this CEM as authorization.

131 ENGINEERING CHANGE

Mech. Code 719

11-3-71

SUBJECT: Tab, Dual Pitch — Redesigned Parts — Model 87X

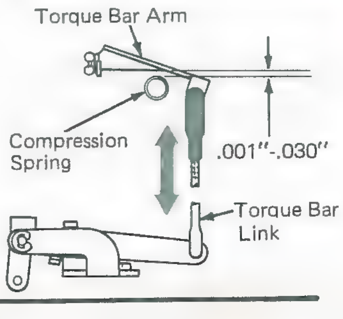
PURPOSE: The torque bar actuating linkage has been redesigned to improve tab touch. The tab keylever down stop has been eliminated.

SYMPTOM: On some early dual pitch "Selectric" II Typewriters the tab touch may be heavy or "spongy". The operator may complain of intermittent tab failures if the tab keybutton is not hit hard.

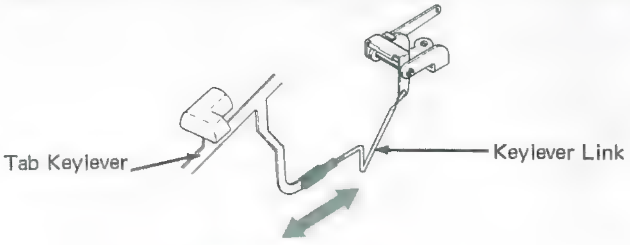
SOLUTION: Install the tab linkage B/M only if experiencing this problem.

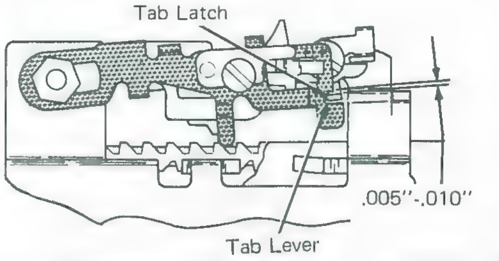
ADJUSTMENTS

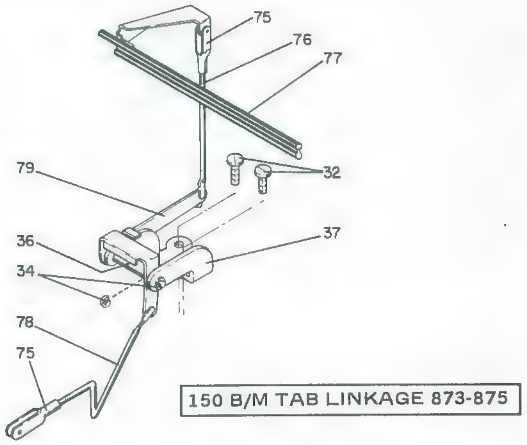
1. Tab Torque Bar Link — Disconnect the tab keylever link. Adjust the tab torque bar link so the torque bar arm clears the tab rack compression spring by .001"-.030" at rest.



2. Tab Keylever Link — Adjust the tab keylever link so that when the tab keylever is bottomed, the tab lever overthrows the tab latch by .005"-.010".







PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
719	32	1164577	Screw	.01
	34	1073418	C-Clip	.01
	36	1138065	Shaft, 8X3	.05
	36	1128039	Shaft, 8X5	.10
	37	1138059	Bracket, 8X3	.20
	37	1128033	Bracket, 8X5	.20
	75	1110529	Clevis	.15
	76	1204245	Link, Torque Bar	.20
	77	1204666	Torque Bar, Tab 873	2.50
	77	1204667	Torque Bar, Tab 875	2.50
	78	1205344	Link, Keylever	.35
	79	1205341	Bellcrank, 873	.65
	79	1205342	Bellcrank, 875	.65
	150	1287368	B/M, Tab Linkage 873	4.35
	150	1287369	B/M, Tab Linkage 875	4.40

MACHINES AFFECTED: Above 873 — 1012229 & 875 — 2010237 have this change.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Reliability ● Appl. 3 ● Code 32, Expires 10-1-72

PARTS INFORMATION: Order Lexington.

132 SERVICE INFORMATION

Mech. Code 704

12-1-71

SERVICE HISTORY INSERT

The recommended location for the service history insert on "Selectric" II Typewriters and "Selectric" Typewriters with snap-off covers is behind the RH cover latch.

On "Selectric" Typewriters manufactured prior to snap-off covers, a clip (P/N 1138386) is available and can be used for mounting the insert to the bottom cover.

133 SERVICE INFORMATION

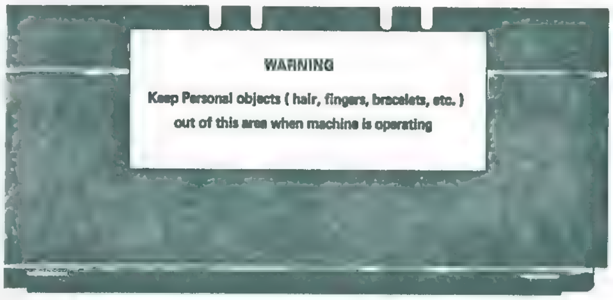
Mech. Code 704

12-1-71

WARNING LABEL – "SELECTRIC" TYPEWRITER

PURPOSE: To warn operators to keep personal objects (hair, etc.) away from the print shaft area when machine is operating.

A warning label is being installed on the RH dust cover on new "Selectric" and "Selectric" II Typewriters. This label must be put on all "Selectric" Typewriters on the next service call or inspection. Clean the dust cover with cleaning fluid and install the label toward the rear of the dust cover as shown.


WARNING
Keep Personal objects (hair, fingers, bracelets, etc.) out of this area when machine is operating

Rolls of labels (100/roll) will be available from the local CE Branch Office.

NOTE: Machines after 7X1-9445276, 7X3-9125312, 7X5-9319232, 8X3-1006508, 8X5-2005447 have this label plant installed.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use applicable serv. code.

Order labels from Lexington using P/N 1203839. (P/N 1203839 is a quantity of one label – specify in quantities of 100 to receive full rolls).

134 ENGINEERING CHANGE

Mech. Code 711

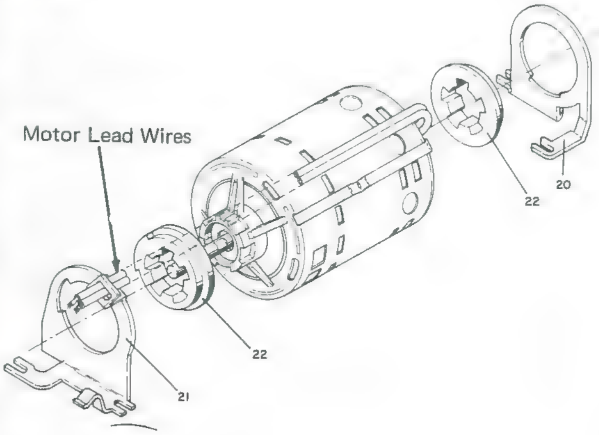
12-1-71

SUBJECT: Motor Mount Brackets – Redesigned

PURPOSE: The motor mount brackets have been redesigned to minimize noise caused by motor vibration. These brackets are one-piece and incorporate the softer Model D motor mounts.

ADJUSTMENTS: When motor removal is necessary, only the LH motor mount bracket has to be loosened and the motor and bracket may be pivoted out the rear of the machine. Drive belt tracking should be checked after replacing the motor.

NOTE: These motor mounts should only be used with motors that have overhead lead wires. However, it may be necessary on some early motors of this type to rotate the motor end bell(s) in order to align the key on the rubber motor mount with the keyway on the motor mount bracket.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	QTY.	PRICE
711	20	1147613	Bracket, RH "Selectric" Typewriter	1	.40
	21	1147614	Bracket, LH "Selectric" Typewriter	1	.40
	22	1190434	Mount, Motor	2	.50

MACHINES AFFECTED: 7X1—9465789, 7X3—9151786, 7X5—9351415. "Selectric" II Typewriters will have this change at a later date.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Mfg. ● Appl. 3 ● Use applicable ser. code

PARTS INFORMATION: Order Lexington. Former level parts remain available.

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(CEM No. 95 Cont'd 4-21-71)

3. Manually latch the carrier return mechanism and rotate the turning wheel (while counting the revolutions of the escapement shaft) until the mainspring is wound the proper number of turns as shown in Fig. 2.

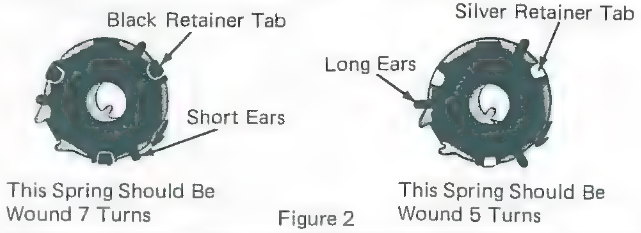

Black Retainer Tab
Silver Retainer Tab
Long Ears
Short Ears
This Spring Should Be Wound 7 Turns
This Spring Should Be Wound 5 Turns

Figure 2

4. With the carrier to the right, feed the carrier return cord around the large pulley and connect it to the cord drum (Fig. 1 No. 1) and carrier.

   Connect the carrier return cord using scissors clamps or the pusher end of a spring hook as shown in Fig. 1.
5. Hold the slack out of the carrier return cord and rotate the turning wheel until the carrier approaches the left sideframe. Stop hand cycling when the notch in the escapement cord drum is visible.
6. Connect the escapement cord to the drum and wrap approximately one turn *(2 turns for 7X3) of the cord around the drum (Fig. 3 No. 2).
7. Thread the cord around the cord tension pulley (Fig. 3 No. 4) and connect it to the carrier. (Fig. 3 No. 3)

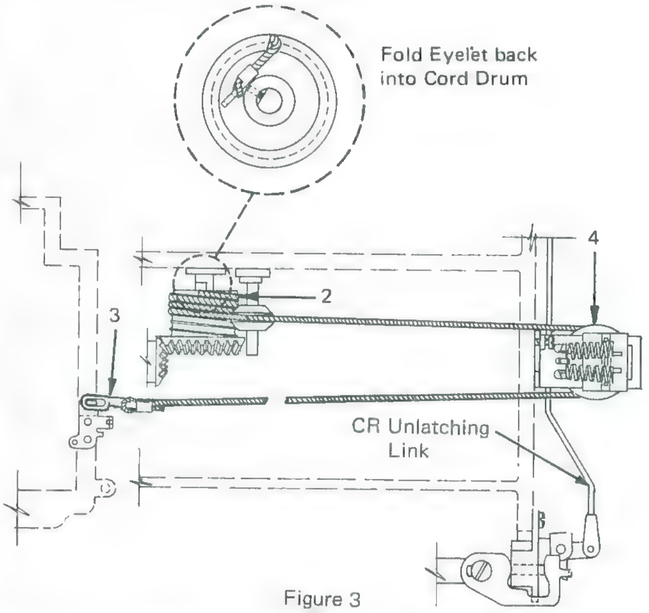


Figure 3

8. Pull the carrier return cord over the LH front pulley and connect the unlatching link.

*By using cord anchor (P/N 1175578) a longer cord can be cut to the proper length.

96 ENGINEERING CHANGE

Mech. Code 704

2-24-71

SUBJECT: 12 Pitch Margin Scale — Numbering Change

PURPOSE: Operator preference for numbering in increments of 5.

SOLUTION: The numbers on the 12-pitch margin scales have been changed back to increments of five (5, 10, 15, etc.) from increments of six (6, 12, 18, etc.).

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
704	54	1141573	7X1 — 12P Margin Scale	1.00
	54	1141575	7X3 — 12P Margin Scale	1.25
	54	1141577	7X5 — 12P Margin Scale	1.50

MACHINES AFFECTED: Above 7X1-9408986, 7X3-9074818, 7X5-9273536 have new level scales.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

NOTE: Margin scales with numbers in increments of six are no longer available. If a customer has a machine with a margin scale in increments of six and insists on a margin scale with increments of five, the scale should be changed using Service Code 36.

CHANGE TYPE: Product Feature ● Application 3 ● Code 36.

PARTS INFORMATION: Order Lexington. Scrap present stock of P/N's 1141573, 1141575, and 1141577 on a Debit Memo, charging OP HQ Acct. Code 14-090-0232 and noting this CEM as authorization. Reorder using same P/N's.

97 ENGINEERING CHANGE

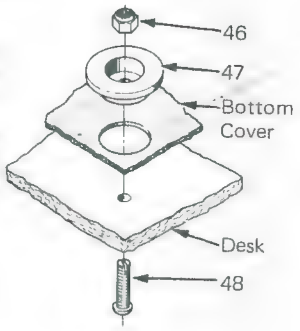
Mech. Code 704

4-21-71

SUBJECT: Bolt Down Hardware

PURPOSE: To provide a theft-deterrent procedure to bolt down the bottom cover without restricting the tilt-up feature.

ADJUSTMENTS: The bolt down adapters should be positioned in the center holes of the bottom cover. To determine which bolt to use, add 1/2" to the thickness of the desk.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	QTY.	PRICE
704	46	117281	Locknut	2	.15
	47	1287004	Cover Adaptor	2	.35
	48	1287007	Bolt 5/8"		.08
	48	1287008	Bolt 3/4"		.08
	48	1287009	Bolt 1"		.08
	48	1287010	Bolt 1 1/4"		.08
	48	1287011	Bolt 1 1/2"		.08
	48	1287012	Bolt 1 3/4"		.08
	48	1287013	Bolt 2"		.08

NOTE: The former level bolt down parts should be used when the weight of the machine will be supported by the bolt down hardware. (i.e. fold-away or drop leaf desks).

CAUTION: Bolting a machine down by other than these recommended procedures could cause an electrical safety hazard or machine failure. An excessively long bolt could interfere with the motor windings or other inner mechanisms of the machine.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Serviceability ● Application 3 ● Use applicable service code.

PARTS INFORMATION: Order Lexington.

98 SERVICE INFORMATION

Mech. Code 723

4-21-71

POPPING LATCHES

Before replacing a popping tilt or rotate latch assembly try flushing its pivot points with cleaning fluid and relubricating.

Also, flush a replacement assembly before installing. Some of these assemblies have been found with foreign material on them.

99 ENGINEERING CHANGE

Mech. Code 720

5-5-71

SUBJECT: Index Overthrow Stop — New

PURPOSE: The power frame and overthrow stop both have larger holes to accommodate a larger screw with a smaller thread for a positive locking action.

SOLUTION: New overthrow stop cannot be installed on earlier level machines.

ADJUSTMENTS: Remain the same.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
720	454	1147605	Overthrow Stop	.25
	455	63324	Screw	.05

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(CEM No. 99 Cont'd 5-5-71)

MACHINES AFFECTED: Above S/N 721-9432831, 273-9105732, 725-9298517 have new stop plant installed.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Reliability ● Application 3 ● Use applicable service code.

PARTS INFORMATION: Order Lexington.

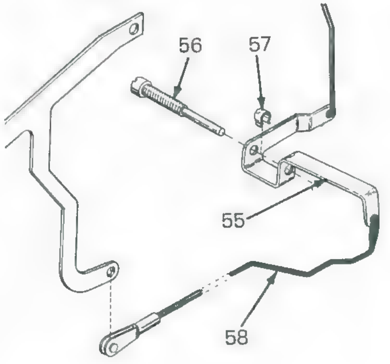
100 ENGINEERING CHANGE

Mech. Code 718

5-5-71

SUBJECT: Tab Bellcrank And Mounting – Redesigned – 7X3, 7X5

PURPOSE: The tab bellcrank has been redesigned and is now mounted on an extension of the lower screw that mounts the rotate arm bracket.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
718	55	1147212	Bellcrank, Tab	.25
	56	1147214	Screw, Bellcrank Mounting	.05
	57	1147343	Clip	.02
	58	1147215	Link, Keylever 7X3	.35
	58	1147342	Link, Keylever 7X5	.35

MACHINES AFFECTED: After S/N 7X3-9092883, 7X5-9298570 have this change plant installed.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Manufacturing ● Application 3 ● Use applicable service code

PARTS INFORMATION: Order Lexington. Retain former level parts for field replacement.

101 ENGINEERING CHANGE

Mech. Code 711

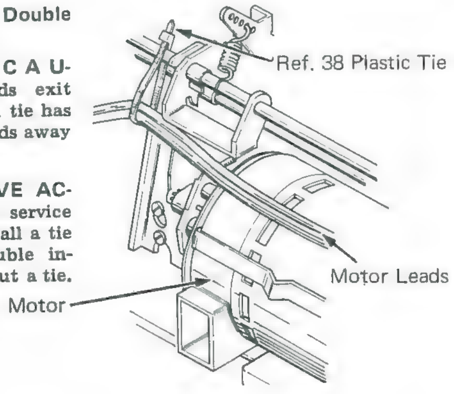
5-5-71

(Revised) 12-15-71

SUBJECT: Motor – Double Insulated

SAFETY PRECAUTIONS: Motor leads exit from rear of motor. A tie has been added to keep leads away from motor pawls.

SAFETY CORRECTIVE ACTION: On the next service call or inspection, install a tie (711-38) on any double insulated machine without a tie.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
711	38	1159519	Plastic Tie	.08
	40	1147420	Motor, 115V, 60 Hz	43.25

MACHINES AFFECTED: Above S/N 7X1—9429936, 7X3—9097506, 7X5—9293619, have this change.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Safety ● Appl. 3 ● Code 32

PARTS INFORMATION: Order Lexington.

102 ENGINEERING CHANGE

Mech. Code 740

5-5-71

SUBJECT: Dead Key Disconnect B/M

PURPOSE: Dead key disconnect B/M's are no longer SER items and may be ordered through regular channels. The purpose of the dead key disconnect is to disable the dead key mechanism and allow normal escapement for dead key positions.

PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
740	50	1274995	B/M, Accent Gray	8.50
	50	1274996	B/M, Onyx Blue	8.50
	50	1274997	B/M, Accent Blue	8.50
	50	1274998	B/M, Charcoal	8.50

MACHINES AFFECTED: Dead key disconnect can be installed only on "Selectric" Typewriters with S/N's beginning with 5 or 9.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .7 Hour

CHANGE TYPE: Product Feature ● Application 3 ● Use applicable service code

PARTS INFORMATION: Order Lexington.

103 ENGINEERING CHANGE

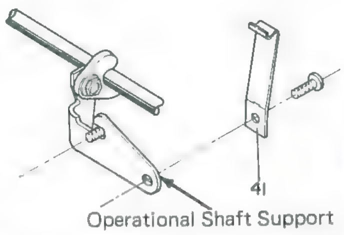
Mech. Code 704

6-16-71

SUBJECT: Dust Cover Clip – 7X5

PURPOSE: A replacement dust cover clip can be installed on 7X5 machines when the existing clip on the shift bearing plate is broken.

SOLUTION: Install clip under RH screw of operational shaft support.



PARTS REQUIRED:

MECH.	REF.	PART NO.	DESCRIPTION	PRICE
704	41	1145537	Clip, Dust Cover	1.50

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Serviceability ● Application 3 ● Use applicable service code.

PARTS INFORMATION: Order Lexington.

104 SERVICE INFORMATION

Mech. Code 708

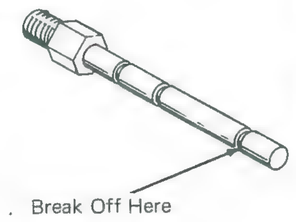
6-16-71

ON-OFF/TAB KEYBUTTON MOUNTING STUD

The replacement stud announced in CEM 50 is designed for use on both "Selectric" Typewriters and "Selectric" I/O's.

If interference between this stud and covers on the baseline "Selectric" is experienced, the end of the stud may be broken off at the first undercut area of the stud.

Ensure that sharp edges are removed.



105 SERVICE INFORMATION

Mech. Code 749

6-16-71

PINFEED PLATEN CORES – NEW LEVEL SHORTER

The new pinfeed platen cores announced in CEM 59 are .018" shorter than the previous cores of corresponding pin-to-pin dimensions. The new pinfeed platens have a hex shaft and the old pinfeed platens have a threaded shaft.

Should the core on an old level pinfeed platen need to be replaced, order a new level core, Mech. 749, Ref. 117, PLUS ONE EACH of the platen shims, Mech. 749, Ref. 26. This will give you the proper pin-to-pin dimension.

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26] 670X [27]

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418 SAFETY

3-12-80

Model(s): "Selectric"

SUBJECT: Motor Label

On Canadian-built 895 machines there is a possibility of the motor label adhesive failing. The label could curl up and be near or touching the tab rack, reducing the effectiveness of the protective insulation system. If this condition exists, remove the label. It is not necessary to replace the label.

SAFETY PRECAUTION:

NOTE: Removal of the label may cause the motor to shift position. Recheck motor position.

MACHINES AFFECTED: S/N between approx. 4514800 — 4864161.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

419 SERVICE INFORMATION

3-12-80

Model(s): "Selectric"

SUBJECT: Top Cover Latch — Shock Mounts

SYMPTOM: Top cover vibrates and cannot be satisfactorily adjusted to eliminate the problem.

SOLUTION: Install the top cover latch shock mounts (05-82) (Figure 1).

Adjust the latches so that the shock mounts are completely compressed.

Note: This is done to ensure that the customer will not have difficulty in lifting the top cover.

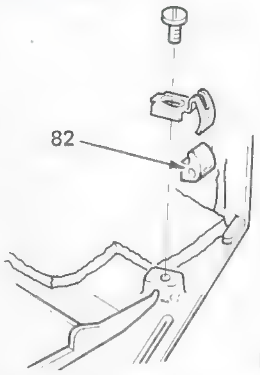

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
05	82	6519448	Shock Mount, Top Cover	2	.02

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Applicable Service Code

420 RELIABILITY

3-12-80

Model(s): 8XX

(Revised) 5-21-80

SUBJECT: Bellringer Bellcrank — Redesigned

The paddle portion of the bellringer bellcrank (10-8) has been lengthened and an extension added to prevent it from slipping over top of the linelock bail (09-80).

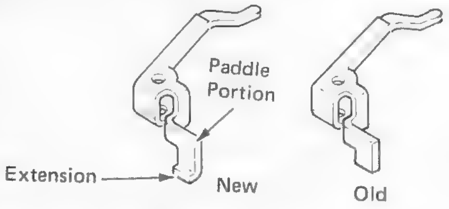

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
10	8	1256662	Bellringer Bellcrank	1	†

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Use Applicable Service Code

421 SERVICE INFORMATION

5-7-80

Model(s): 7XX, 8XX

(Revised) 9-10-80

SUBJECT: Torque Limiter Hub And Spring Clamp — Redesigned

PURPOSE: These parts were redesigned to reduce torque limiter spring (25-9) breakage and the loosening or shifting of the clamp (25-5). An extension has been added to the tail of the torque limiter spring clamp (25-5), which will fit under a lug added to the torque limiter hub (25-3).

SOLUTION: Replace the hub and clamp when necessary. The redesigned parts are compatible with previous level parts.

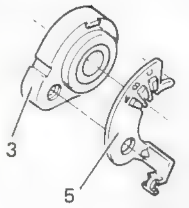

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	3	1256545	Hub	1	†
	5	1256546	Clamp	1	†

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Old level parts will no longer be available.

Estimated Installation Time: .2 Hr.

422 SERVICE INFORMATION

5-7-80

Model(s): 670X

(Revised) 9-10-80

SUBJECT: Announcement — IBM "Selectric" III Typewriter

All detailed service information is contained in the "Selectric" III Typewriter Service Manual Supplement. The following is a list of the design modifications and features of the "Selectric" III Typewriter:

1. Multiple copy control lever removed.
2. New platen knobs.
3. New margin set levers and indicators.
4. See-through margin scale for single pitch models.
5. Lighted margin scale for dual pitch models.
6. Combination page-end indicator and paper support.
7. 54-tooth ratchet standard on all models.
8. New design for optional soundhood.
9. External paper bail control lever.
10. Keyboard arrangements for 92, 94 or 96 characters (92-character standard) — no field conversions.
11. 96-character typehead (compatible with IBM Electronic Typewriters).
12. New style keybuttons (similar to IBM Electronic Typewriters).
13. New cover design.

The machine identification number, on the left side of the power frame, has 13 digits. The numbers are used to provide the following information:

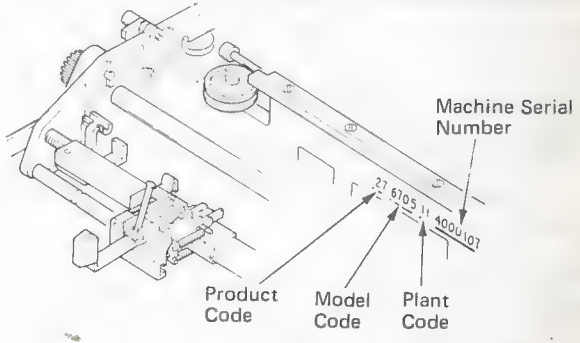

Figure 1

MACHINE TYPE	MODEL CODE
13" Single Pitch Fabric	6701
13" Single Pitch Non-Correcting	6702
15" Single Pitch Correcting	6703
13" Dual Pitch Correcting	6704
15" Dual Pitch Correcting	6705

(Continued)

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(CEM 422 Continued)

RECOMMENDED PARTS INVENTORY (RPI)

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
02	333	1303501	Tilt Ring Asm.	1	†
	415	1254802	Socket, Lower Ball	1	†
05	141	1254495	Brkt. Erase Table	1	†
10	100	1254997	Margin Pointer	2	†
	107	1304140	Carrier Pointer D.P.	1	†
	107	1254690	Carrier Pointer S.P.	1	†
	119	1303102	Lamp	1	†
11	602	1249875	Connector	1	†
30	141	1254900	Brkt. Erase Table, L. (S.R.)	1	†
	166	1254899	Brkt. Erase Table, R. (S.R.)	1	†

The "Selectric" Adjustment Parts Manual (F/N 241-5939-2) should be used with the "Selectric" Service Manual Supplement (F/N 241-6176-0) to service the "Selectric" III Typewriter.

Call reporting information for the "Selectric" III is the same as for "Selectric" and "Selectric" II Typewriters. This information is found in General CEM No. 5. The product code for "Selectric" III is code 27.

423 SAFETY

5-7-80

Model(s): 670X

(Revised) 9-10-80

SUBJECT: Transformer Housing And Line Cord Plate — Wire Tie

PURPOSE: Early level dual pitch machines have a wire tie (11-606) to hold the line cord plate (11-600) and transformer housing (11-601) in place during shipment. If it is necessary to remove the wire tie to service the machine, the wire tie need not be replaced. However, if the transformer housing has a **BLACK** line cord plate (11-600), it **MUST** be replaced with a **GRAY** line cord plate (11-600) which has additional lugs to hold it in place.

Newer level machines have the **GRAY** line cord plate.

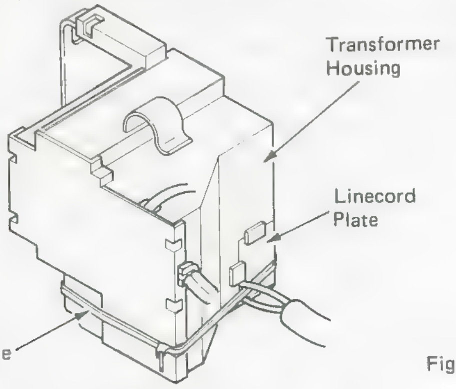


Figure 1

MECH/REF.		PART NO.	DESCRIPTION	QTY.	PRICE
11	600	1304051	Line Cord Plate, Gray	1	†

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .2 Hrs.

Use Service Code 32

This CEM Expires 9-10-81

424 SERVICE INFORMATION

5-21-80

Model(s): All "Selectric" Typewriters

SUBJECT: Paper Bail Arm Screws — Redesigned

Self-locking material has been added to the threads of the paper bail arm screws (22-02) (Figure 1). This will prevent loosening of the screws.

Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
22	2	1256661	Screw	1	†

425 SERVICE INFORMATION

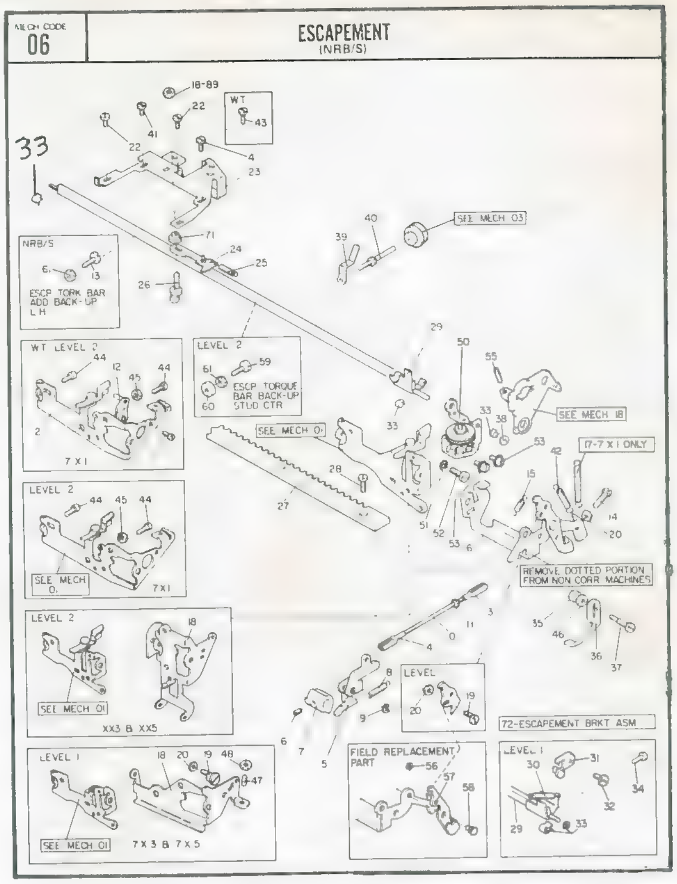
6-18-80

Model(s): 7XX, 8XX, 670X

SUBJECT: APM Correction — Escapement Torque Bar Retainer Clip

The left-hand escapement torque bar retainer clip (06-33) is not shown in the APM (241-5939).

Mark this change in your APM.



426 SERVICE INFORMATION

6-18-80

Model(s): 8XX (RB/S), All 670X

SUBJECT: Backspace Driver Mounting Stud — B/M

Backspace failures due to a broken driver mounting stud may be corrected using the backspace driver mounting stud B/M.

INSTALLATION PROCEDURE

1. Remove driver mounting stud from backplate by tapping lightly.
2. Remove the "C" clip, washer, driver, pitch cam (disconnect pitch cable), and pitch cam spring from the stud.
3. Insert the new stud (24-155) in the pitch cam spring, pitch cam (connect pitch cable) and driver.
4. Install washer and "C" clip on the front of the stud.
5. Install stud through the hole in the backplate and secure with washer and nut (Figure 1).

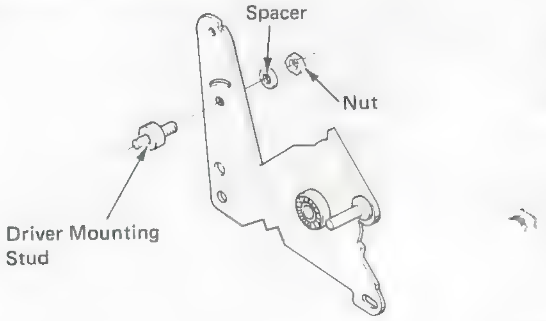


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
24	154	1279024	Stud B/M (Contains Ref. 155, 156 And 157)	1	*
	155	1279023	Stud	1	*
	156	1142264	Nut	1	.10
	157	257984	Washer	1	.04

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26] 670X [27]

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427 SERVICE INFORMATION

6-18-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Stroke Counters — SER Only

New install stroke counter B/Ms are available **only** by submitting an SER with DCO attached. All necessary parts and installation instructions will be included in the SER. Replacement parts for existing counters will remain available. Installation instructions and hardware for the stroke counter on machines with new style check pawl are included.

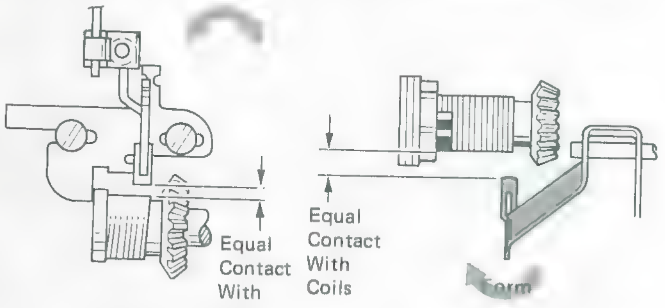
428 SERVICE INFORMATION

7-2-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Carrier Return — Uneven/Sluggish/Jerky

SYMPTOM: Uneven or sluggish carrier return can be caused by failure of the carrier return shoe (03-502) to **fully engage** each of the last 2 to 3 coils on the right side of the pinion spring (25-13) (Figure 1).



(Level 1) (Level 2) Figure 1

If the shoe is "cocked" to either side, so that greater pressure is applied to a single spring coil, increased wear will result on both the spring and on the return pinion (25-14) at that point. This leads to rapid loss of adjustment and more frequent need for parts replacement. It is especially important that the shoe NOT apply greater pressure to the inside loop as this prevents the remaining outside coils from driving.

SOLUTION: If experiencing this problem, or when replacing parts in this area, check to ensure that the return shoe engages the coils of the return pinion spring evenly. When making the shoe overlap adjustment, be sure the shoe is not "cocked" and that shoe overlap does not exceed 3 coils. Best results will be achieved with 2 to 2 1/2 coil overlap.

429 RELIABILITY

7-2-80

Model(s): Correcting "Selectric" II — Model 895

SUBJECT: Weak Cycle Clutch Drive/Contaminated Lubricant

PURPOSE: On some Correcting "Selectric" II Model 895s the cycle clutch lubricant may be contaminated by metal particles.

SYMPTOM: The contamination produces a polishing effect on both the cycle clutch spring and cycle clutch pulley arbor, leading to slippage.

SOLUTION: If experiencing weak cycle clutch drive and normal adjustments are ineffective, the following procedure is recommended:

1. Remove cycle shaft assembly and disassemble cycle clutch.
2. Thoroughly remove **all traces** of lubricant from cycle shaft assembly and cycle clutch pulley hub.
3. Install new cycle clutch spring, lubricate, and adjust.

Note: This procedure has proven to be effective in the majority of cases. Replacement of the cycle clutch pulley hub is not recommended unless these steps fail to correct the problem.

MACHINES AFFECTED. *Between approx. S/N: Model 895 — 4765000 to 4874000.*

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .5 Hr.

Use Service Code 32

This CEM Expires 6-1-81

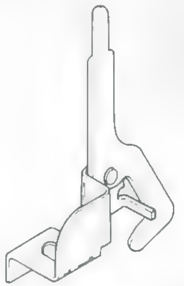
430 SERVICE INFORMATION

7-2-80

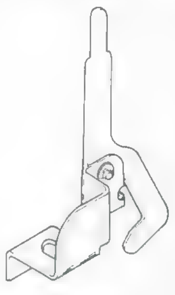
Model(s): 8XX, 670X

SUBJECT: Center Cover Bracket — Redesigned

The center cover latch bracket (05-43, 05-18) has been redesigned so that the latch lever (05-44, 05-16) can be installed to the inside of the bracket (Figure 1). This change gives more clearance between the lever and the foam, and makes it easier to unlatch the covers.

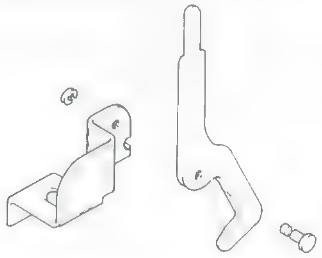


New Level Figure 1



Old Level Figure 2

Until the new bracket is available, manufacturing is using the old level parts (Figure 2) and reversing the lever (Figure 3). This method can also be used in the field if desired.



Modified Old Level Figure 3

431 SERVICE INFORMATION

7-2-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Multiplying Lever Mounting Stud B/M

The multiplying lever is not included in B/M 25-324. This lever can be ordered under 25-250. Mark this reference number in your APM (25-250) and add the reference number and P/N to your PN/PL.

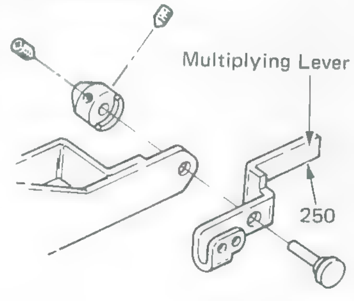


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	250	1128016	Multiplying Lever	1	.10

432 SERVICE INFORMATION

7-2-80

Model(s): "Selectric" III Typewriters — 670X

SUBJECT: PN/PL Correction

The fan (11-400) (sound reduction machines only) should be P/N 1205958. Mark this change in your PN/PL.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
11	400	1205958	Fan, Sound Reduction Machines Only	1	1.40

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433 SERVICE INFORMATION

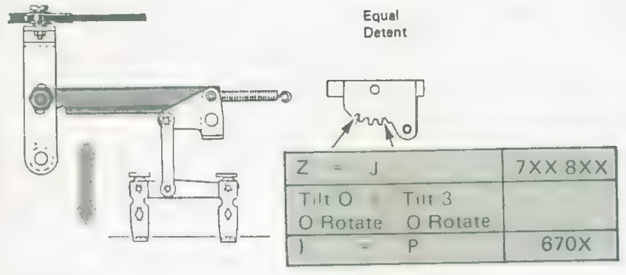
7-30-80

Model(s): 7XX, 8XX and 670X

SUBJECT: Adjustment Parts Manual (APM F/N 241-5939-2) Correction

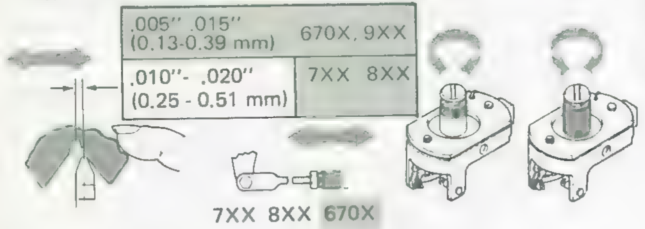
The shaded areas in the frames (64 and 81) below are corrections that should be marked in your APM.

64 Tilt Arm Motion (23-28)



Z = J	7XX 8XX
Tilt O = Tilt 3 O Rotate O Rotate	
) = P	670X

81 Typehead Homing (Final) (02-420) (02-441)



.005" .015" (0.13-0.39 mm)	670X, 9XX
.010"- .020" (0.25 - 0.51 mm)	7XX 8XX

Upper Case	
Tilt 2 Zero Rotate	"Degree" 7XX 8XX
	"R" 670X

434 SERVICE INFORMATION

9-10-80

Model(s): 7X3, 8X3, 6701, 6702, 6704

SUBJECT: Operational Shaft Support (Lost Index Motion)

PURPOSE: To reduce operational shaft flex, and improve reliability of the index mechanism on applications such as continuous multiple copy forms, pin feed, and 45/48 tooth OCR.

SOLUTION: Install the operational shaft support B/M using the following method:

1. Attach the drilling templete (Figure 1A) to the machine frame as shown in Figure 1B. Drill the two holes with a No. 22 drill bit (P/N 450265) and remove template.

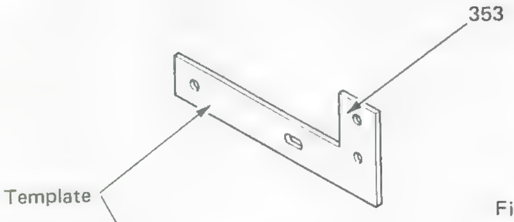
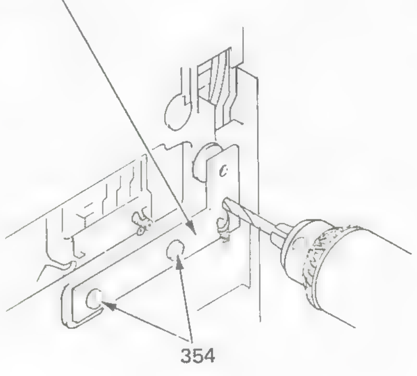


Figure 1A



Bottom View

Figure 1B

2. Assemble and install the operational shaft support bracket asm. as shown below (Figure 2A & B).

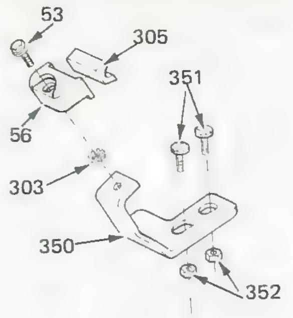


Figure 2A

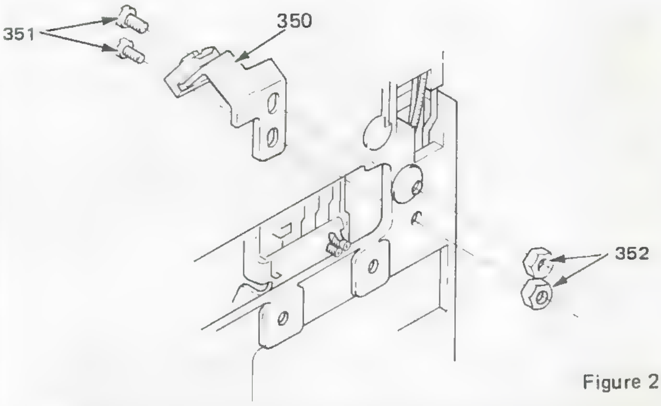
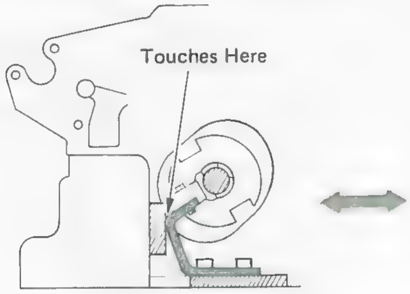


Figure 2B

3. Position the operational support bracket front-to-rear so the front of the bracket evenly contacts the power frame as shown below.
4. Adjust APM Frame 119.

118 Operational Shaft Support Bracket, Front-To-Rear (25-350)



7/8XX ONLY

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
25	356	1279494	Operational Shaft Support B/M (Includes 25-53, 56, 303, 305, 350, 351, 352)	1	†
	53	1128326	Screw — Support Mounting	1	.03
	56	1159843	Bearing Support	1	.65
	303	56722	Lock Washer — Support Mounting	1	PP08
	305	1287910	Operational Shaft Support Bearing	1	†
	350	1279492	Operational Shaft Support Bracket	1	†
	351	1164579	Screw — Support Bracket Mounting	2	PP14
	352	257187	Nut — Support Bracket Mounting	2	PP13
	353	1279491	Drilling Template	1	†
	354	438566	Screws, Template Mounting	2	PP15

Note: Order reference 353 as necessary.

435 RELIABILITY

9-10-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Fabric Ribbon Reverse Failures

PURPOSE: Some replacement ribbon plates may have a bind in the area of the stud and the fork in the plate (Figure 1).

SYMPTOM: Ribbon fails to reverse.

SOLUTION: Check for binds in the area shown in Figure 1. Also check new assemblies before installing. If a bind is found on a new assembly return as a new defective part per General Administrative CEM No. 35.

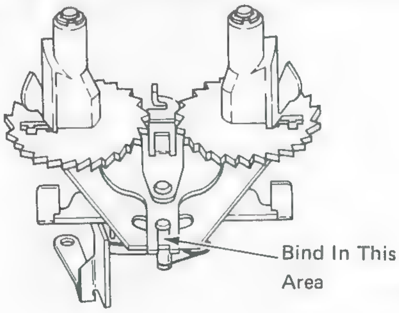


Figure 1

436 SERVICE INFORMATION

9-10-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Motor Pawl Assembly — Washer Added

Some machines have nylon washers added to the motor pawl assembly (Figure 1). If experiencing start problems, check for a bind between the washer and the pawls. To eliminate the bind, remove the washers.

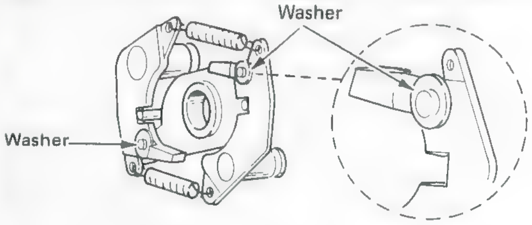


Figure 1

MACHINES AFFECTED: Approx. S/N: 7X1, 0885914 — 0907710; 8X3, 5200758 — 5250192; 8X5, 6603755 — 6730476; 6701, 0000001 — 0000095; 6702, 1000001 — 1003567; 6703, 2000001 — 2004383; 6704, 3000001 — 3000761; 6705, 4000001 — 4038927.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Service Code 32

437 SERVICE INFORMATION

9-10-80

Model(s): 670X

SUBJECT: Transformer Replacement — Wire Routing

There is a possibility of interference between the transformer secondary wires and the gear train. To reduce this possibility when replacing the transformer, the secondary wires should be placed on the outside of the Tab/Set Clear link. Figure 1 shows the correct wire path with the machine in the service position. Some early production machines have a metal clamp to secure the wires. Wire ties may be used if necessary.

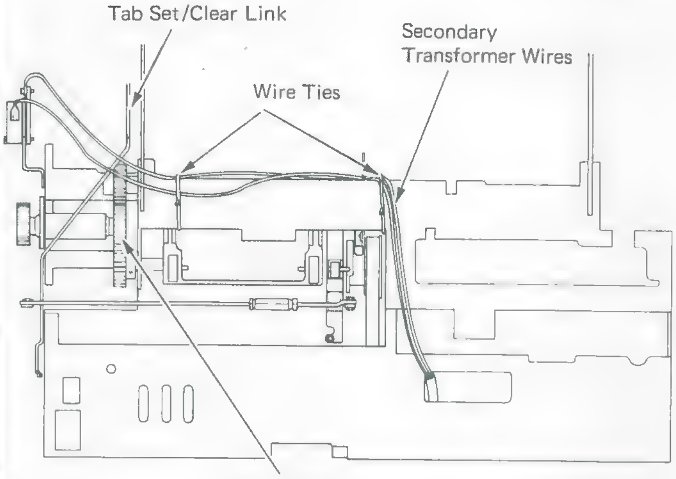


Figure 1

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CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26] 670X [27]

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409 SERVICE INFORMATION

1-30-80

Model(s): 7XX, 8XX, 670X

(Revised) 6-18-80

SUBJECT: Paper Bail Arm Spring

Several different levels of paper bail arm springs (22-33, 26-209) have been used in production of "Selectric" Typewriters. Each level provides a slightly different amount of spring tension. The current production paper bail arm spring, P/N 1206821, obsoletes all previous levels and may be used on any level "Selectric" Typewriter. Machines above approximate S/N: — 7X1 — 0808048, 8X3 — 5044864, 8X5 — 6133326, Canada 8X5 — 4844000, and 670X — All, have this spring installed.

The paper bail arm springs in Parts Packet No. 5 are not current level. Scrap all paper bail arm springs in Parts Packet No. 5. Order replacement quantities 22-33 or 26-209.

Paper bail arm springs have been deleted from Parts Packet No. 5.

When paper bail spring replacement is required on machines below the serial number range listed above, both springs should be replaced. The universal paper bail Bill of Material (22-219 and 26-104) includes the correct level springs.

410 SERVICE INFORMATION

1-30-80

Model(s): Selectric

(Revised) 9-24-80

SUBJECT: Ribbon Lift Arm — Stripped Screw

PURPOSE: If the mounting screw hole for the ribbon lift arm (15-25) is stripped, an additional nut (15-5) can be added to the inside of the carrier to retain the screw (15-6).

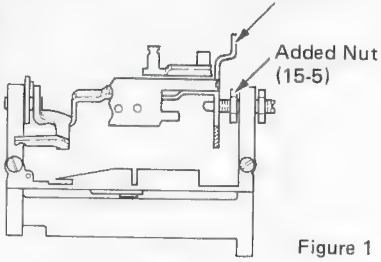


Figure 1

411 SERVICE INFORMATION

1-30-80

Model(s): Dual Pitch 8XX

SUBJECT: Margin Rack Gear

A limited number of machines will be shipped to the field with 6-32 screws (P/N 1175107 parts package 01), instead of the standard 4-40 screw (P/N 1175102). Margin rack gears will be black and the screws will require using a number 6 fluted wrench.

413 RELIABILITY

2-13-80

Model(s): Correcting Selectric

SUBJECT: Correction Tape — Intermittent Feed Failures

Intermittent correction tape feed failures and/or incomplete lift off may be caused by a defective pawl feed mounting screw (26-5). The screw is undersize in the area where the washer (26-7) is mounted (Figure 1). This allows the washer to be off center and partially cover the teeth on the spiked take-up ratchet (Figure 2).

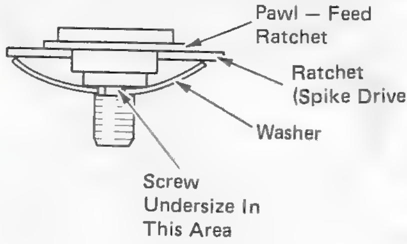


Figure 1

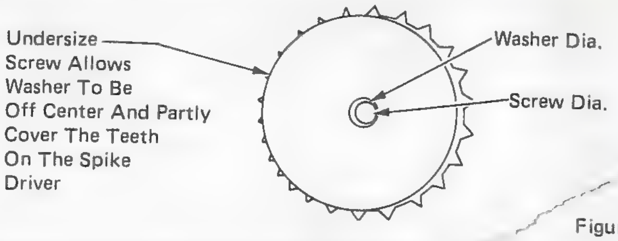


Figure 2

When experiencing this problem, replace the screw (26-5).

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
26	5	1290653	Screw	1	.15

MACHINES AFFECTED: 8X3 — 5147714 — 5181900; 8X5 — 6462050 — 6557510.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Service Code 32

This CEM Expires 12-1-80

415 RELIABILITY

2-27-80

Model(s): "Selectric" II And Correcting

SUBJECT: Escapement Bracket — Washer/Clip Added

A limited number of machines were manufactured with a "C"-clip or washer between the screw (19-7) and the tab lever (Figure 1).

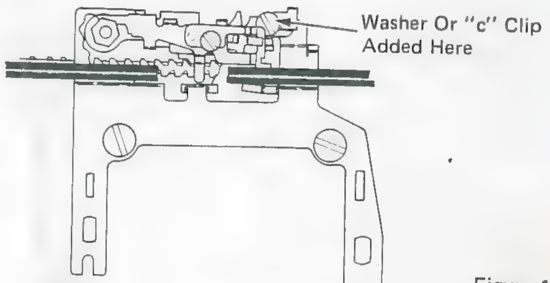


Figure 1

The washer or "C"-clip will prevent the tab lever from falling under the extension of the escapement bracket (Figure 2).

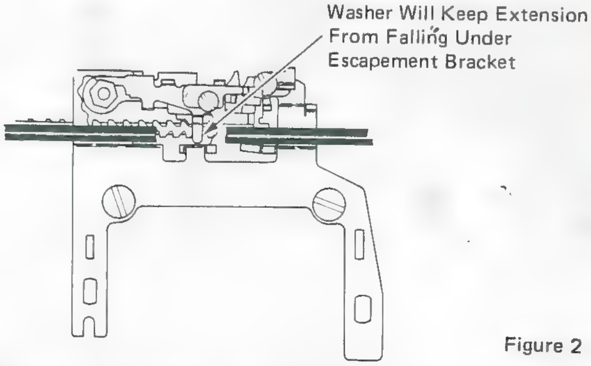


Figure 2

If experiencing a binding tab lever and the washer has been added, and normal adjustments do not correct the problem, replace the escapement bracket.

MACHINES AFFECTED: Approx. S/N: 8X5 — 6513000-6545800; 8X3 — 5155558-5188352.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: 2.0 Hrs.

Use Service Code 32

This CEM Expires 1/15/81

M Corp. 1979, 1980

416 SERVICE INFORMATION

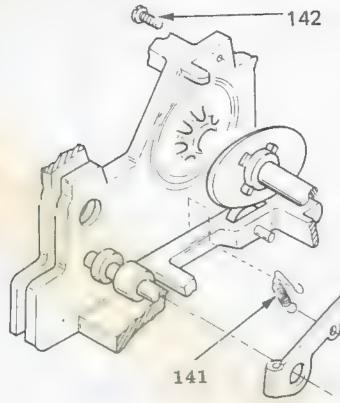
2-27-80

Model(s): 721, 8XX

(Revised) 9-24-80

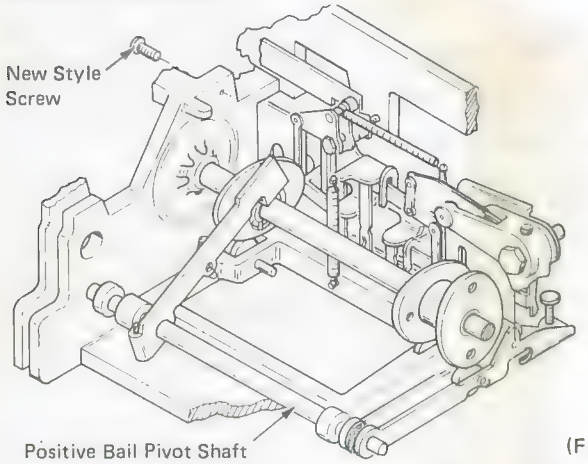
SUBJECT: Check Pawl, Spring, Stud And Tab Keylever — Redesigned

PURPOSE: The cycle clutch check pawl, stud and spring has been designed to improve cycle shaft cam stop location (Figure 1).



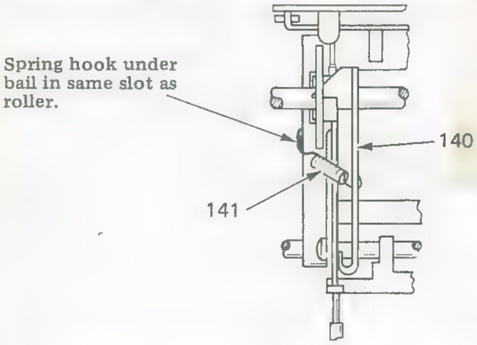
(Figure 1)

The new pawl (23-140) is now mounted on the positive bail pivot shaft (23-118). The screw (23-142) replaces the studs (23-417, 423). The studs (23-417), 423) will remain available for replacement on old level machines (Figure 2).



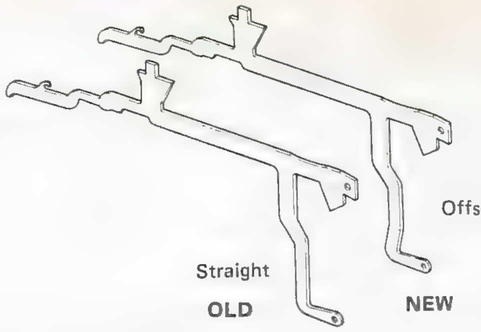
(Figure 2)

The pawl is spring loaded to the left by spring (23-141), and is connected to the positive bail as shown in Figure 3.



(Figure 3)

The tab keylever (18-28, 19-43) has been redesigned (Figure 4), to ensure there is no interference between the check pawl (23-140) and tab keylever. The new redesigned tab keylever will work on all level machines. The old level keylever will be obsoleted. Scrap all old level keylevers and reorder new style.

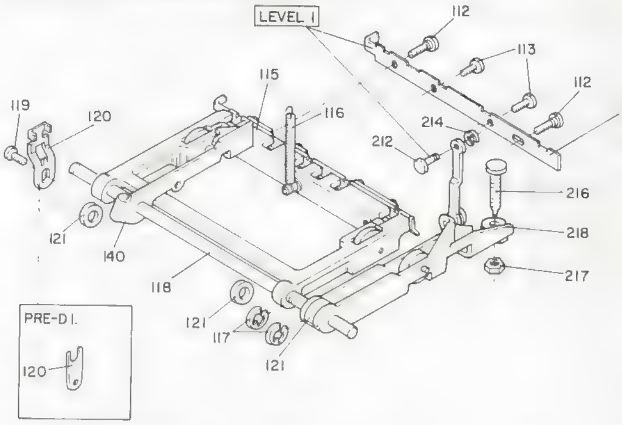


(Figure 4)

Removal Procedure For Check Pawl:

1. Remove the retainer screw (23-119) and retainer plate (23-120).
2. Remove the two "C"-clips (23-117) that retain the -5 latch bail (23-218).
3. Move the positive bail shaft (23-118) to the left far enough to remove the check pawl (23-140).

Note: When replacing the shaft: (1) Ensure the felt pad (23-121) is between the two lugs of the -5 latch bail (23-218), (2) Make sure the notch on the right end of the shaft fits into the "D" shape window of the cycle clutch latch plate (21-218).



MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
18	28	1256683	Tab Keylever	1	†
19	43	1256683	Tab Keylever	1	†
23	140	1256655	Check Pawl	1	2.40
	141	1256658	Spring	1	.15
	142	1256659	Screw	1	.02

MACHINES AFFECTED: Above S/N: 8X3 — 5170000; 8X 5 — 6550000; 721 — 0860000.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: Old style check pawls, springs and studs will remain available for replacement in existing machines.

417 SERVICE INFORMATION

3-12-80

Model(s): 7XX, 8XX

(Revised) 9-24-80

SUBJECT: Cover Hinge — B/M

A bill of material is now available for 7XX (04-34) and 8XX (05-23) machines. The bill of material includes the top cover LH and RH hinge, plastic clamp and screws.

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
04	34	1279487	Cover Hinge B/M (Contains Ref. 4, 32, 5)	1	2.05
05	23	1279486	Cover Hinge B/M (Contains Ref. 4, 5, 6, 49)	1	1.60

CEM Customer Engineering Memorandum

"Selectric" Typewriter

7XX [21] 8XX [26] 670X [27]

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435 RELIABILITY

9-10-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Fabric Ribbon Reverse Failures

PURPOSE: Some replacement ribbon plates may have a bind in the area of the stud and the fork in the plate (Figure 1).

SYMPTOM: Ribbon fails to reverse.

SOLUTION: Check for binds in the area shown in Figure 1. Also check new assemblies before installing. If a bind is found on a new assembly return as a new defective part per General Administrative CEM No. 35.

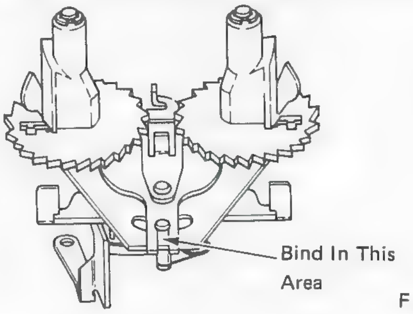


Figure 1

436 SERVICE INFORMATION

9-10-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Motor Pawl Assembly — Washer Added

Some machines have nylon washers added to the motor pawl assembly (Figure 1). If experiencing start problems, check for a bind between the washer and the pawls. To eliminate the bind, remove the washers.

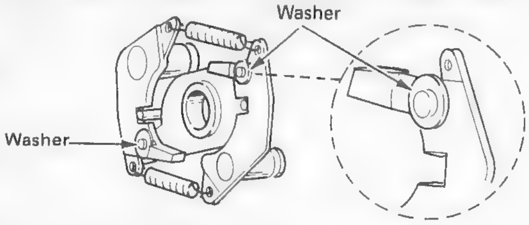


Figure 1

MACHINES AFFECTED: Approx. S/N: 7X1, 0885914 — 0907710; 8X3, 5200758 — 5250192; 8X5, 6603755 — 6730476; 6701, 0000001 — 0000095; 6702, 1000001 — 1003567; 6703, 2000001 — 2004383; 6704, 3000001 — 3000761; 6705, 4000001 — 4038927.

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Estimated Installation Time: .1 Hr.

Use Service Code 32

437 SERVICE INFORMATION

9-10-80

Model(s): 670X

SUBJECT: Transformer Replacement — Wire Routing

There is a possibility of interference between the transformer secondary wires and the gear train. To reduce this possibility when replacing the transformer, the secondary wires should be placed on the outside of the Tab/Set Clear link. Figure 1 shows the correct wire path with the machine in the service position. Some early production machines have a metal clamp to secure the wires. Wire ties may be used if necessary.

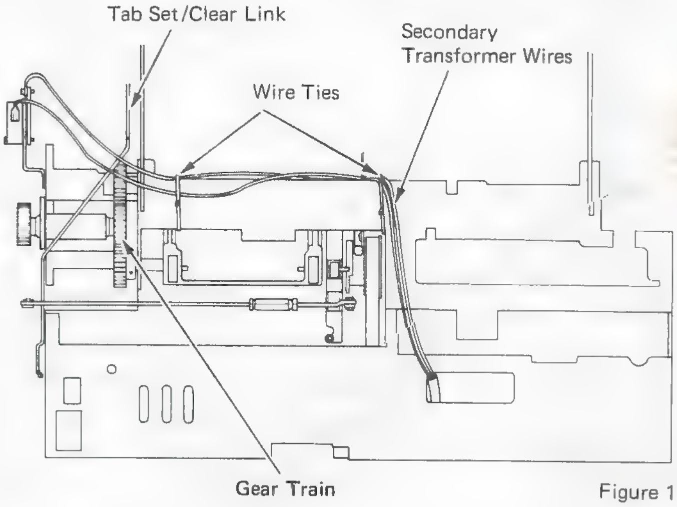


Figure 1

438 SERVICE INFORMATION

9-24-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Upper Idler Gear Bushing — Redesigned

The upper idler gear bushing (23-477) has been shortened and the washer (23-476) eliminated. Old level bushings will no longer be available. When replacing an old level bushing, the washer (23-476) is not required.

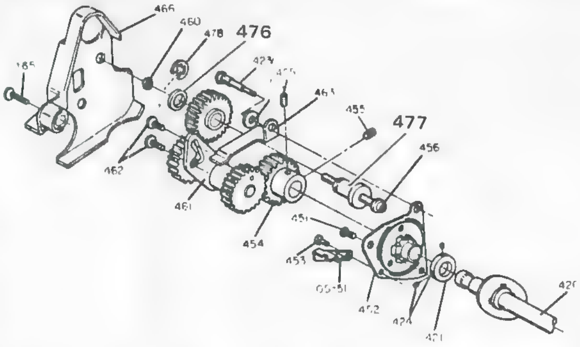


Figure 1

MECH/REF		PART NO.	DESCRIPTION	QTY.	PRICE
23	477	1256692	Bushing	1	†

439 SERVICE INFORMATION

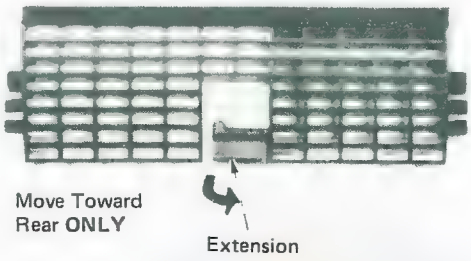
9-24-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Motor Vent Grill Extension — Breakage

Moving the motor vent grill extension too far to the rear or toward the front of the machine may cause it to crack or break. The extension should be moved toward the rear of the machine only far enough to let the linecord in. This extension is required to maintain double insulation.

Note: CSI (F/N 241-5114-2) page 17, item 8, also applies to "Selectric" III typewriters.



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440

SERVICE INFORMATION

9-24-80

Model(s): 7XX, 8XX, 670X

SUBJECT: Cable Guide — Redesigned

The velocity cable guide (02-217) located on the left-hand side of the carrier has been redesigned. The guide is now installed by hooking it over the carrier casting instead of it being held in place by the retainer (02-49) (Figure 1).

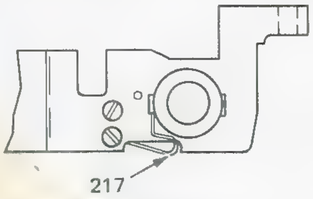

Figure 1

MECH/REF	PART NO.	DESCRIPTION	QTY	PRICE
02 217	1141637	Cable, Guide	1	.05

TIMELY INFORMATION PROGRAM

9-24-80

SUBJECT: Detent Cam — Left-To-Right Adjustment

When making the left-to-right adjustment of the detent cam (APM Frame 54) (02-505), the following procedure is helpful:

1. *Remove the element.*
2. *Loosen both setscrews in the detent cam.*
3. *Hand cycle the machine until the detent cam follower (02-501) is in the low area of the detent cam.*
4. *Adjust the cam left-to-right for .001"-.010" clearance between the detent cam follower and detent actuation lever.*
5. *Push detent cam follower to left to clear the detent cam.*
6. *While holding the detent cam follower to the left, hand cycle the machine until you can tighten the setscrews.*
7. *After tightening the screws, check adjustment.*

480 RELIABILITY

2-10-82

Type(s): 6121, 6126, 6701, 6702, 6703, 6704, 6705

SUBJECT: Carrier Return And Express Backspace Shoe Arm – Redesigned

PURPOSE: The thickness of the one piece CR shoe arm (24-105) has been increased by .012 to reduce the flex in the "Selectric" III express backspace mechanism.

SYMPTOM: Difficulty maintaining the required adjustments for proper operation of the express backspace mechanism.

SOLUTION: Install the redesigned express backspace/CR arm (24-105), and shoe (24-111). A grip clip (24-106) is required for mounting the arm on the present installed inventory. (Machines manufactured above the specified S/N range, incorporate a redesigned mounting shaft (25-220) that utilizes the present "C"-clip). When installing the grip clip, maintain minimum side play (no binds) of the arm on the shaft.

ADJUSTMENTS: The following adjustments should be performed in the recommended sequence:

1. Form the express backspace keylever (24-105) so the keybutton assumes the same height as an adjacent character keybutton.
2. Adjust the pawl assembly (24-108) to the left for maximum slot adjustment (APM Frame 204) ("Selectric" III only).
3. Form the CR shoe arm for proper shoe overlap and contact with pinion spring (APM Frame 200).
4. Adjust the CR shoe to pinion clearance for .010"-.020" (3/4 to 1-1/2 turns from shoe engagement) (APM Frame 172).
5. Form the express backspace/CR arm lug to obtan CR shoe engagement with the pinion spring when the TOP of the keylever has traveled .035"-.050" from the TOP of the slot in the front keylever guide comb. Recheck APM Frame 172. (NOTE: This adjustment differs from that in APM Frame 202.)

MECH/REF	PART NO.	DESCRIPTION	QTY.	PRICE
24 105	1336414	Express Backspace/CR Shoe Arm	1	—
111	1336412	Shoe (Blue)	1	
106	1115633	Grip Clip	1	
207	1287500	Express Backspace/ CR Shoe Arm B/M (Includes Qty. 1 Mech. 24, Ref. 105, 106, 111)	1	

MACHINES AFFECTED: Plant installed above approx. S/N Type 6701: 0014988; 6702: 1012839; 6703: 2029941; 6704: 3017964; 6705: 4419911; 6705: 5190268

THE FOLLOWING INFORMATION FOR IBM USE ONLY

Parts Information: The redesigned arm replaces all previous one-piece CR/exp. B/S shoe arms. The new shoe (blue) must be used on the new arm. The former lever shoe (white) remains available.

Estimated Installation Time: .2 Hr.

Use Service Code 33

This CEM Expires 3-1-83

481 SERVICE INFORMATION

2-17-82

Type(s): 6700, 6701, 6705

SUBJECT: Announcement/Discontinuance – IBM "Selectric" III

Announcement of a new IBM Correcting "Selectric" III model 6700, and standardizing production of the "Selectric" III typewriter.

Discontinuance of the "Selectric" III models 6702, 6703 and 6704.

The "Selectric" III will be manufactured with standard machine features. The "Selectric" III model 6705 is also available with a limited amount of optional features. The model 6701 can be obtained by schools and Government customers only.

"SELECTRIC" III AND CORRECTING "SELECTRIC" III STANDARD TYPEWRITER FEATURES	MODEL 6700	MODEL 6701	MODEL 6705
Covers-Topaz Bronze		X	
(With Raven Black Bottom Cover)	X		X
Acoustical Filter Hood			X
Lighted Margin Scale			X
End of Page Indicator	X	X	X
Repeat Underscore	X	X	X
54 Tooth Indexing	X	X	X
Dual Pitch (Prestige Elite Element Only)			X
Ribbon Cassette	X		X
Fabric Ribbon		X	
Correcting Mechanism	X		X
Half Backspace			X
92 Character Keyboard US Correspondence	X	X	X
10 Pitch (W/Courier Element)		X	
12 Pitch (W/Prestige Elite Element)	X	X	
OPTIONAL FEATURES			
Additional Cover Colors (8) (With Raven Black Bottom Cover)			X
96 Character Keyboard (Choice of 4)			X
92 Character Library Keyboard			X
48 Tooth Indexing			X
Dead Key Disconnect (W/96 Char. Kybd.)			X
Manual Velocity (W/96 Char. Kybd.)			X
Modified Motor (Government Only)			X
Elements (Choice Of Any 2 Current Typestyles)			X

DISCONTINUED FEATURES

* Pin Feed Platen
* Court Reporter Platen
* Card Holding Platen
* OCR Manifold Platen
* Platen Indexing 24, 27, 31, 36 and 45T
* Double Indexing
* Handicapped Attachments
* Stroke Counter
* Ribbon Limiting Device
* Repeat Character (Row B)
* Shift Sensing
* 13 Foot Line Cord
* 3 Wire Line Cord
9 Pitch
External Ribbon Control
All Other Keyboards
(No Field Conversions)
Special Color Covers

* These features can be field installed upon customer request at the current applicable rates.

Continued

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(CEM No. 481 Continued)

PAINTED COVER PARTS – "SELECTRIC" III

	MODEL	PEBBLE GRAY	TOPAZ BRONZE	LAUREL GREEN	AUTUMN RED	RAVEN BLACK	SABLE BROWN	MARLIN BLUE	COCOA BROWN
TOP COVER ASM.	6700 12P CORR	–	1336021	–	–	–	–	–	–
	6701-6702 10P	1336012	1336013	1336014	1336015	1336016	1336017	1336018	1336019
	6701-6702 12P	1336020	1336021	1336022	1336023	1336024	1336025	1336026	1336027
	6704 DP CORR	1336028	1336029	1336030	1336031	1336032	1336033	1336034	1336035
	6703 10P	1336036	1336037	1336038	1336039	1336040	1336041	1336042	1336043
	6703 12P	1336044	1336045	1336046	1336047	1336048	1336049	1336050	1336051
	6705 DP CORR	1336052	1336053	1336054	1336055	1336056	1336057	1336058	1336059
CENTER COVER ASM.	6700 12P CORR	–	1336925	–	–	–	–	–	–
	6701-6702 SP	1336108	1336109	1336110	1336111	1336112	1336113	1336114	1336115
	6703 SP CORR	1336116	1336117	1336118	1336119	1336120	1336121	1336122	1336123
	6704 DP CORR	1336124	1336125	1336126	1336127	1336128	1336129	1336130	1336131
*	6705 DP CORR	1336132	1336133	1336134	1336135	1336136	1336137	1336138	1336139
BOTTOM COVER ASM.	6700	–	–	–	–	1336192	–	–	–
	6701-02-04	1336188	1336189	1336190	1336191	1336192	1336193	1336194	1336195
	6703-05	1336196	1336197	1336198	1336199	1336200	1336201	1336202	1336203
TOP AND CENTER COVER ASM.	6700 12P CORR	–	1336926	–	–	–	–	–	–
	6701-6702 10P	1336927	1336928	1336929	1336930	1336931	1336932	1336933	1336934
	6701-6702 12P	1336935	1336936	1336937	1336938	1336939	1336940	1336941	1336942
	6703 10P CORR	1336943	1336944	1336945	1336946	1336947	1336948	1336949	1336950
	6703 12P CORR	1336951	1336952	1336953	1336954	1336955	1336956	1336957	1336958
	6704 DP CORR	1336959	1336960	1336961	1336962	1336963	1336964	1336965	1336966
*	6705 DP CORR	1336967	1336968	1336969	1336970	1336971	1336972	1336973	1336974
TOP COVER ASM. SOUND REDUCTION	6701-2 10P	1336060	1336061	1336062	1336063	1336064	1336065	1336066	1336067
	6701-6702 12 P	1336068	1336069	1336070	1336071	1336072	1336073	1336074	1336075
	6704 DP CORR	1336076	1336077	1336078	1336079	1336080	1336081	1336082	1336083
	6703 10P	1336084	1336085	1336086	1336087	1336088	1336089	1336090	1336091
	6703 12P	1336092	1336093	1336094	1336095	1336096	1336097	1336098	1336099
	6705 DP CORR	1336100	1336101	1336102	1336103	1336104	1336105	1336106	1336107
CENTER COVER ASM. SOUND REDUCTION	6701-6702 SP	1336148	1336149	1336150	1336151	1336152	1336153	1336154	1336155
	6703 SP CORR	1336156	1336157	1336158	1336159	1336160	1336161	1336162	1336163
	6704 DP CORR	1336164	1336165	1336166	1336167	1336168	1336169	1336170	1336171
*	6705 DP CORR	1336172	1336173	1336174	1336175	1336176	1336177	1336178	1336179
BOTTOM COVER ASM. SOUND REDUCTION	6701-02-04	1336204	1336205	1336206	1336207	1336208	1336209	1336210	1336211
	6703-05	1336212	1336213	1336214	1336215	1336216	1336217	1336218	1336219
TOP AND CENTER COVER ASM. SOUND REDUCTION	6701-6702 10P	1336840	1336841	1336842	1336843	1336844	1336845	1336846	1336847
	6701-6702 10P	1336848	1336849	1336850	1336851	1336852	1336853	1336854	1336855
	6703 10P CORR	1336856	1336857	1336858	1336859	1336860	1336861	1336862	1336863
	6703 12P CORR	1336864	1336865	1336866	1336867	1336868	1336869	1336870	1336871
	6704 DP CORR	1336872	1336873	1336874	1336875	1336876	1336877	1336878	1336879
*	6705 DP CORR	1336880	1336881	1336882	1336883	1336884	1336885	1336886	1336887

*Center section shipped with double insulated logo. Order 3 wire logo as required.

Parts Information: The "Selectric" III complete cover assemblies will no longer be available. When a complete cover asm. is required, order a top and center cover asm. and the appropriate bottom cover. (Figure 1)

NOTE: Until stock is depleted, orders for the top and center cover asm. will be filled with the complete cover asm.

Use Applicable Service Code

482 SERVICE INFORMATION

2-17-82

Type(s): 6700, 6705

SUBJECT: Announcement – IBM 210 Correctable Ribbon Cassette – IBM 800 T-III Ribbon Cassette

The "Selectric" III ribbon cartridge and ribbon mechanism have been redesigned to increase ribbon yield while offering the operator simplified ribbon loading. The following is a list of the design modifications and features of the new "Selectric" III Ribbon Cassette.

1. Four fewer ribbon mechanism adjustments.
2. Ribbon lift guide and shock wire are on the ribbon cassette.
3. Ribbon cassette replacement is simplified.
4. 38.6% higher character yield per correctable ribbon cassette.
5. 37.9% higher character yield per T-III cassette.
6. Thinner film ribbon and new ink formulation.

THEORY OF OPERATION

The method of operation of the lift and feed mechanisms are very similar to the selective ribbon with the exception of the redesigned lift guides and the T-III ribbon feed.

The lift guides are now part of the cassette. A return spring on the cassette keeps the guides spring loaded against the lift arms. The rest position of the lift arms is determined by forming an extension to the escapement bracket. The lift motion is provided in the same way as the earlier mechanism through the ribbon lift cam and ribbon lift follower. However, the ribbon lift cam and spread adjusting plate have been redesigned and are not compatible with the earlier mechanism.

The feed mechanism for the T-III ribbon has been altered by changing the ratio between the intermediate gear and the upper gear, giving approximately 38% higher character yield per T-III ribbon. The increased yield of the correctable film ribbon is due to the use of a thinner material which allows more ribbon to be wound on the spool.

The design and operation of the correcting mechanism remains unchanged, with the exception of a tape deflector which has been added to the tilt ring.

Field Upgrade

Customers requesting the ribbon cassette to be installed on their existing "Selectric" III should be referred to Marketing for price and availability. Orders will be handled on an MES basis only.

Parts

All ribbon cassette parts will be listed under new mechanism code 27. This CEM is to be used to reference parts, pending update of the APM.

Adjustments

The following adjustments are not required for the ribbon cassette mechanism:

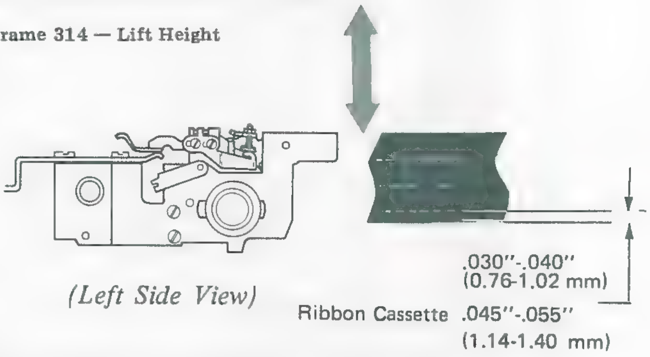
Frame 316 — Shock Wire
Frame 319 — Shock Wire Disengage Lever
Frame 320 — Shock Wire Disengage Lever
Frame 324 — Load Lever
Frame 339 — L/H Ribbon Lift Guide

Continued

(CEM No. 482 Continued)

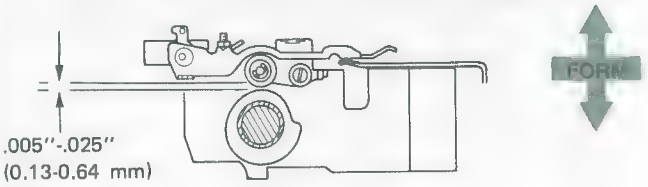
The following adjustments are changed:

Frame 314 — Lift Height



(Left Side View)

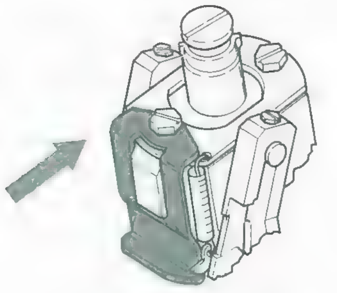
Frame 315 — Lift Arm Stop (Ribbon Cassette)
"For RC Only — Form Stop On Escapement Bracket"

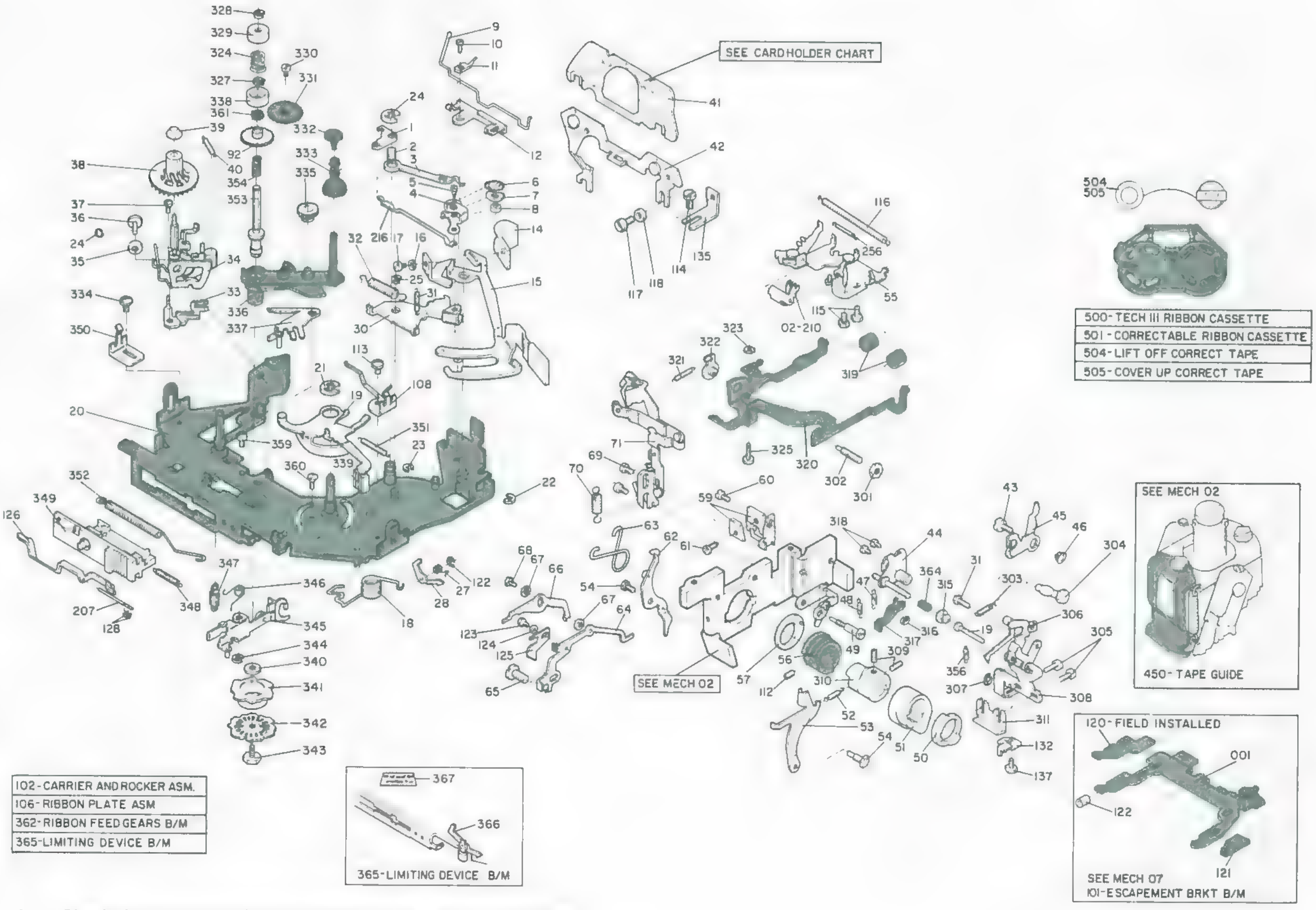


(Right Side View)

The following adjustment is added:

Tape Deflector — Adjust the deflector against the tilt ring.





1. Shaded parts are unique to Ribbon Cassette mechanism.

Continued

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(CEM No. 482 Continued)

MECH/REF.		PART NO.	DESCRIPTION	QTY.	PRICE
27	1	1206022	Bellcrank		
	2	1206020	Spring Fd. Blk.		
	3	1206037	Detent		
	4	1290655	Pawl		
	5	1290653	Screw		
	6	1206012	Wheel, Spiked		
	7	1206033	Washer		
	8	1206014	Spacer		
	9	1206016	Wire, Separator		
	10	48594	Screw		
	11	1206372	Spring		
	12	1206017	Support		
	13	1279490	Pawl — Feed B/M (Inc. Ref. 4, 5, & 216)		
	14	1206882	Guide, Corr. Tape		
	15	1206009	Lever Tape		
	16	1135663	Washer		
	17	1206145	Screw		
	18	1206018	Spring		
	19	1206007	Lever Ribbon Load		
	20	1359633*	Plate, Ribbon		
	21	257982	Retainer		
	22	1103695	Retainer		
	23	219633	Retainer		
	24	1073418	Retainer		
	25	1092125	Retainer		
	27	1206853	Spring		
	28	1359632*	Load Lever Latch		
	30	1206021	Arm, Swing		
	31	1164938	Spring		
	32	1206004	Spring, Sw. Arm		
	33	1206092	Fork Cradle		
	34	1287340	Cradle Asm.		
	35	1072477	Washer		
	36	1206166	Stud		
	37	38261	Screw		
	38	1256182	Ratchet, Supply		
	39	1206083	Cap. Ratchet		
	40	1116729	Spring, Low Bias		
	41	1206424	Cardholder		
		1206368	Cardholder, Pin Feed		
	42	1206219	Bkt. L/H Mounting		
	43	1090007	Stud		
	44	1206040	Follower, Ribbon		
	45	1290568	Follower, Feed		
	46	1206065	Hub, Follower		
	47	1206319	Spring		
	48	1171923	Spring		
	49	1206047	Stud		
	50	1464823	Cam, Tape Feed		
	51	1206046	Cam, Print/Corr.		
	52	1071687	Spring, Inhibit.		
	53	1290579	Inhibitor, Tape Feed		
	54	1206163	Stud		
	55	1290577	Vel. Bkt. Dual Transport		
		1141624	Vel. Bkt. All Nylon Transp.		
	56	1359730*	Cam Ribbon Lift		
	57	1206045	Cam, Tape Lift		
	58	1206044	Follower, Lift		
	59	1206188	Bkt. Cable Guide With Tubing		
	60	1206186	Screw		
	61	1206422	Screw		
	62	1290574	Arm, Actuating		
	63	1206146	Spring		
	64	1290580	Arm, Lift		
	65	1206165	Stud, Lift Arm		
	66	1290595	Arm		
	67	1132211	Washer		
	68	1206809	Screw Lift Asm.		
	69	1206204	Screw		
	70	1206054	Spring		
	71	1206048	Lift Guide		
	102	1359643*	Carrier and Rocker Asm.		
	106	1359640*	Ribbon Plate Asm.		
	108	1206034	Retainer, R.H.		
	112	1164096	Screw, Lift Cam		
	113	1164291	Screw, Cart. Ret.		
	114	1164027	Screw, Sel. Ribbon		
	115	1164580	Screw, Bkt. Mtg.		
	116	1204553	Shock Spring		
	117	1172397	Screw, Sel. Ribbon		
	118	1138796	Washer		
	122	1073418	Clip		
	123	1172397	Screw, Lift Arm Stop		
	124	1290605	Washer, Lift Arm Stop		
	125	1290599	Stop, Lift Arm		
	126	1290578	Bellcrank, Inhib.		
	128	251989	Retainer		
	132	1290601	Guide, Torque Bar		
	135	1206642	Bkt., Sel. Ribbon		
	137	1147429	Screw, T/B Guide		
	207	1290600	Pin, Inhib. Act. Bellcrank		
	216	1290654	Link		
	256	1123827	Spring		
	301	6503	Nut, Lock		
	302	1206556	Screw, Lift Piv.		
	303	1206510	Spring, Fd. Pawl		
	304	1206623	Follower, Feed		
	305	1164939	Screw, Fol. Bkt.		
	306	1290572	Asm, Fd. Cam Fol.		
	307	219633	Clip, Pin Ret.		
	308	1290581	Bkt, Rib. Feed		
	309	1164096	Screw, Fd. Cam		
	310	1164095	Cam. Rib. Fd.		
	311	1164435	Pad, Carr. Support		
	314	1290582	Pin 7/8", Shouldered		
	315	1206517	Roller, Cam Fol.		
	316	219633	Clip, Roll Ret.		
	317	1359729*	Plate Adj.		
	318	1206703	Screw, Plt. Mtg.		
	319	1359714*	Tube		
	320	1359715*	Arm Lift — Sound Reduct.		
		1359563*	Arm, Lift		
	321	1206617	Spring, Wobbler		
	322	1206585	Eccentric, Wob.		
	323	2114985	Nut, Lf. Cr. Loc.		
	324	1206513	Spring Mode		
	325	1206619	Screw, Lift Adj.		
	326	1206605	Screw, Fd. Foll.		
	327	1118361	Retainer, Mode		
	328	219633	Clip, Mode		
	329	1206515	Button, Mode		
	330	1206549	Screw, Int. Gear		
	331	1359638*	Gear, Int.		
	332	1359787*	Screw, Spiked Driver		
	333	1359677*	Spiked Driver		
	334	1164291	Screw, Carr. Ret.		
	335	1206596	Gear, Int.		
	336	1359679*	Swing, Arm		
	337	1206618	Bellcrank, Wobb.		
	338	1206515	Button, Mode		
	339	1206649	Handle Load		
	340	1206692	Washer, Wob. Cam		
	341	1206613	Cam, Wobbler		
	342	1206205	Wheel, Fd. And Lift		
	343	1206537	Screw, Fd.		
	344	264641	Clip, Lift Con.		
	345	1206583	Lever		
	346	1206702	Spring Lift Lev.		
	347	1206560	Spring, Lift Arm		
	348	1091670	Spring, Stencil		
	349	1206598	Lever, Stencil		
	350	1206512	Spring, Ret L.H.		
	351	1206650	Spring Load Lever		
	352	1206562	Spring, Swg. Arm		
	353	1206551	Post, Rib. Fd.		
	354	1206518	Spring, Fd. Gear		
	355	1206697	Gear, Lower		
	356	1164938	Spring		
	359	1164580	Screw, Plate L.H.		
	360	1175097	Screw, Plate R.H.		
	361	1359637*	Gear, Upper		
	362	1359694*	Fd. Grs. B/M		
	364	1359782*	Spring, Lift Follower		
	365	1359722*	B/M, Film Ribbon Lockout		
	366	1206488	Load Latch (Lockout)		
	367	1206491	Label (Lockout)		
02	450	1440012*	Tape Guide RC		
	130	1359643*	Carrier And Rocker RC		
07	001	1359681*	Bkt. Escapement RC *1*		
	101	1359686*	Bkt. Asm. Escapement RC *1*		
	120	1359558*	L.H. Ribbon Stop Bkt. (FI Only)		
	121	1359559*	Corr. Feed Restoring Spring Bkt. (FI Only)		
	122	1359712*	Tube, Downstop		

*Unique To Ribbon Cassette Mechanism.

1 If the L.H. Lift Arm Stop breaks, replace with field fix part ref. 120.

ESCAPEMENT RACK REMOVAL

1. Remove the platen, deflector and feed rolls.
2. Disconnect the margin pitch link from the escapement rack gear.
3. Loosen the switch pitch sector gear screws and move it to the rear of the machine.
4. Remove the escapement rack gear.
5. Remove the escapement rack bearing plate and compression spring.
6. Disconnect the lower half backspace link and remove the half backspace intermediate lever and bellcrank link.
7. Remove the half backspace bellcrank mounting screw and spacer from the power frame.
8. Operate the tab to get the escapement pawl out of the escapement rack. As you pull the escapement rack from the machine, disengage and remove the half backspace bellcrank.
9. The following adjustments should be checked after the escapement rack is replaced.

   a. Half backspace motion
   b. Half backspace rest position
   c. Escapement rack gear
   d. Escapement rack gear lower stop
   e. Switch pitch sector gear
   f. Pitch cable

MARGIN RACK AND RAIL REMOVAL

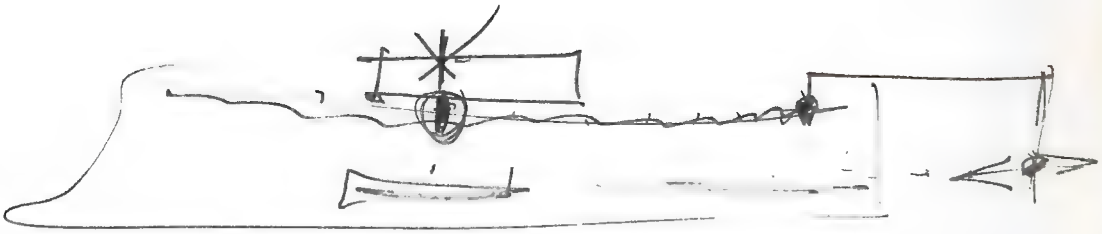
1. Remove the margin rack gear toggle spring and gear guard.
2. Loosen the margin pitch link guide bracket.
3. Disconnect the margin release bracket spring.
4. Loosen the margin release bracket screws and slide the margin release bracket to the rear.
5. Disengage the margin sliders by holding the margin set levers to the rear. Slide the margin rack out of the machine. Note the position of the margin rack spring, washer and bushing.
6. Lift the margin rail out of the machine.
7. Remove the margin rack gear if necessary.
8. The following adjustments should be checked after the margin rack and rail are replaced.

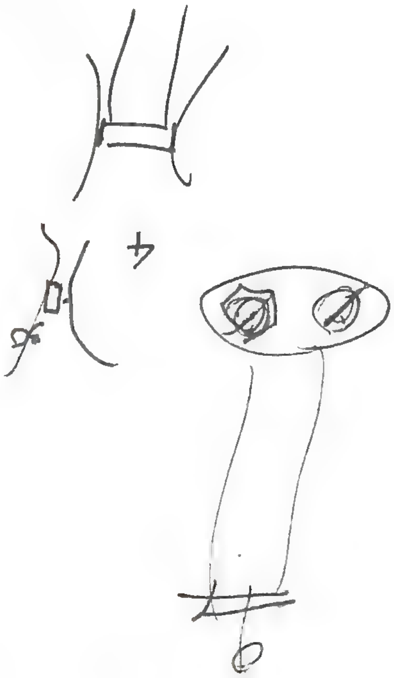
   a. Margin pitch link guide bracket
   b. Margin rack gear
   c. Front margin rack gear stop

CARRIER RETURN/BACKSPACE CABLE DRUM ASSEMBLY REMOVAL

1. Position the carrier at the extreme right.
2. Remove the switch and swing it out of the way.
3. Carefully remove the mainspring.
4. Remove the backspace bellcrank retainer.
5. Remove the pin and C-clip connecting the driver links to the driver.
6. Remove the index interlock link and the left hand index interlock shaft clip. Slide the index interlock shaft toward the right.
7. Remove the index multiplying lever stop and switch bracket screws.
8. Remove the mainspring hub.
9. Remove the two screws that mount the paper feed support to its bracket.
10. Disconnect the backspace bellcrank spring.
11. Remove the mainspring backplate screws and remove the paper feed support bracket.
12. Slide the mainspring backplate from the escapement shaft leaving the backspace bellcrank in its position in front of the ratchet.
13. Remove the cable tension spring, arm and spacer.
14. Remove the CR/BS cable drum assembly and disengage the cable.
15. When installing a new drum assembly, engage the cable, orient it properly and install the cable tension spacer, arm and spring. This procedure will hold the cables in place.
16. Reinstall the remaining parts in reverse order.
17. The following adjustments should be checked:

    a. Paper feed support
    b. Switch bracket
    c. Mainspring hub
    d. Escapement shaft collar
    e. Transport cable tension
    f. Backspace motion
    g. Backspace latch height
    h. Index interlock shaft
    i. Index interlock paddle
    j. Index multiplying lever stop





CHOPPER BLOCK REMOVAL PROCEDURE

1. Remove operational shaft using standard removal procedures.
2. Rotate the operational shaft support bracket (Mech 948, Ref 3) up out of the way.
3. Remove the upper and lower cable clamp pads.
4. Disconnect cables from code bail clips and carefully pull them up behind the print shaft.
5. Disconnect the front clevises of the interposer restoring link, chopper bar actuating link, and escapement trip link from their cam followers.
6. Remove the three mounting screws from the bottom of the chopper block.
7. Disconnect the chopper bar spring from the chopper block. Disconnect the escapement and backspace holding pawl springs from their pawl.
8. From the top of the machine, tilt the chopper block to the left, being very careful of the links and cables, and gently work the chopper block forward and up past the print shaft. Do not get discouraged, it really will come out this way.

NOTE: Be sure to replace the shims under the chopper block, as they are inserted to maintain correct chopper block height.

ESCAPEMENT PAWL BLOCK REMOVAL PROCEDURE

1. Remove tension from leadscrew bias spring.
2. Unhook release lever bias spring from pawl bite setter and remove pawl bite setter.
3. Unhook the escapement and backspace holding pawl springs from their pawls.

   NOTE: Hook the ends of these springs on the large loop of the chopper bar spring so they will be easily accessible during reassembly.

4. Disconnect the escapement trip link clevis from its cam follower.
5. Unscrew and remove the trip lever spring stud and the pawl block mounting stud.
6. Remove pawl release lever stud.
7. Pawl block and pawls may now be removed.

   NOTE: The escapement trip link must be connected to the escapement trip lever before reassembly.

PINWHEEL ASSEMBLY REMOVAL PROCEDURE

1. Remove gear change bracket.
2. Loosen set screws in homing stop.
3. Loosen gear changer shaft collar and pull gear change shaft as far to right as possible.
4. Remove pawl release lever stud.
5. Loosen, but do not remove, the nut on the homing pawl stud. (Mech. 952, Ref. 74).
6. Loosen set screws in pinwheel and backspace ratchet.
7. Remove C clip from pinwheel mounting shaft, and pull shaft out through right hand side frame.

   NOTE: Be careful not to lose the keys in the pinwheel and backspace ratchet.
8. Remove chopper bar spring.
9. Tilt machine up and loosen the two screws that hold the homing pawl mounting plate.
10. Lift the homing pawl mounting plate off its pins being careful not to bend the homing pawl stud.
11. The pinwheel assembly may now be lifted from the machine.

PINWHEEL BRACKET REMOVAL

Machine upright, facing rear

Loosen pitch changer bracket and remove link from bracket.
Loosen collar on gear changer shaft, remove homing stop, and slide gear changer shaft out of its bearing in the pinwheel bracket.
Remove change gears.
Remove nut from jackscrew (located below transfer gears inside pinwheel bracket).
Disconnect the chopper bar link, restoring bar link, and escapement trip link from their cam followers.
Remove both escapement cable clamp pads.
Move backspace pawl lever mounting bracket toward motor so B/S ratchet clears B/S pawl.

Machine resting on its back

Disconnect escapement cables at front of machine.
Disconnect character B/S K/O link from CBS latch (that's the link with the turnbuckle in the middle).
Remove the jackscrew and the two mounting screws that secure the pinwheel bracket to the frame.

Machine upright facing rear

Loosen screw at front of pinwheel bracket.
Slide pinwheel bracket out rear of machine. Be careful not to bend escapement cables. Notice two domed spacers between pinwheel bracket and frame at mounting screws.

LEADSCREW HOMING PROCEDURE

1. Center vernier adjustment of indicator tube. (LH support ring centered between stop rings. Pitch selector and indicator tube window in 1/84 pitch.)
2. Center RH margin rack laterally so that its mounting screws are centered in their holes.
3. Adjust impact plunger bushing to center scribe line on sensing pawl bracket over the RH mounting stud.
4. Set RH margin to position 12. (Disconnect pin should be in 1st tooth of transfer rack margin slider pin in 26th tooth of RH margin rack.
5. Tab to position 12 (use tab locate feature).
6. Adjust leadscrew homing to align scribe line on indicator tube with the number 14 on the indicator scale when in 1/84 pitch.
7. Adjust carrier pointer to 11 on the carrier position scale.
8. Re-adjust tab rack laterally. (See tab adjustments.)
9. Adjust overbank guide for .001 to .005 at LH margin.
10. Form margin set levers to correspond to margin scale.

135 ENGINEERING CHANGE

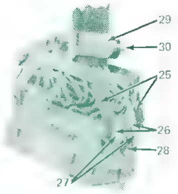
Mech. Code 533

3-25-70
(Revised) 4-8-70

SUBJECT: Cable Clamp Redesigned

PURPOSE: To fully cover the sheath.

SYMPTOM: Cable clamp fails to completely contact sheath and presents a safety hazard.



SOLUTION: If it should become necessary to replace the cable clamp or to use the corrective measure as outlined in Safety CEM No. 181; there is now available to the field an extended cable clamp. Using the extended cable clamp eliminates use of the friction tape.

PARTS REQUIRED

REF.	PART NO.	QTY.	DESCRIPTION	PRICE
25	1161752	2	Bracket	.55
26	052523	4	Screws	.02
27	602229	4	Nuts	.03
28	1161154	4	Spacers	.10
29	0257189	2	Nuts, Clamp	.03
30	0000337	2	Screw	.03

NOTE: All machines above S/N 111091 will have the new clamp installed.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

ESTIMATED INSTALLATION: 0.3 hrs.

TYPE OF CHANGE: Reliability ● CODE 32 ● EXPIRES: 3-31-71

PARTS INFORMATION: Lexington. Order regular or emergency.

136 SERVICE INFORMATION

Mech. Code M15

4-8-70
(Revised) 5-20-70

STEPPING MECHANISM

Diagnosing Stepping Failures: Electrical stepping failures in the ground circuit can be diagnosed with a 48 volt test light by connecting the clip to 48 volts and probing the ground circuit.

Stepping failures are many times caused by an intermittantly breaking Pressure Pad Switch 'A'. This can be determined by shoring the O/P and N/C of the switch with a wire.

Mechanical stepping failures can be caused by a weak detent spring (M15-Ref. 24). If all adjustments are correct shorten the spring by about 4 loops.

137 SERVICE INFORMATION

4-8-70

VERTICAL FORM: CONTROL (SER)

Chains Coming Off Pulleys: If the chains are coming off the pulleys on this SER the cause could be the chain being to stiff. The chains should be very flexable. Lubricating the chain may resolve the problem, if it doesn't, replace the chain.

138 SAFETY

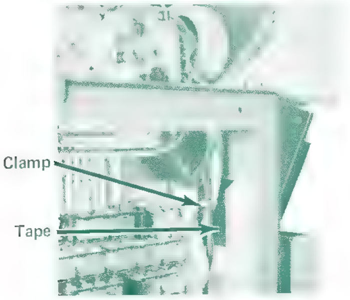
Mech. Code M40

4-22-70
(Revised) 5-20-70

SUBJECT: Baffle Assembly

PURPOSE: To remove potential safety hazard due to cable and wires chafing against metal edge of baffle assembly — Ref. 399.

SOLUTION: Turn Power Off. Drape pieces of electrical tape to form a spread (approx. 4 1/2" long & 2 1/2" wide) over the baffle as illustrated. Bring wires leading from motor to front of cable harness and strap with clamp — P/N 1159255. Clip off excess strap.



NOTE: In some machines wires leading from the motor will not be in sheath as shown. Strap all MT/ST's that have metal baffle assembly, per above instructions.

THE FOLLOWING INFORMATION IS FOR IBM USE ONLY.

ESTIMATED INSTALLATION TIME: 0.2 hrs.

TYPE OF CHANGE: Safety ● CODE: 32

139 ENGINEERING CHANGE

Mech. Code MO1

4-22-70

SUBJECT: LOCKING NUT, FAN HOUSING, ADDED

PURPOSE: To prevent screw, M01, Ref. 32 from coming loose.

SYMPTOM: Fan housing loose on its mounting.

PARTS REQUIRED:

REF.	PART NO.	QTY.	DESCRIPTION	PRICE
37	2114761	2	Nut, Locking	.10

NOTE: MT/ST, S/N 115525 and above should have these nuts plant installed.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

TYPE OF CHANGE: Reliability ● CODE: Use applicable Service Code.

PARTS INFORMATION: Lexington. Order regular or emergency.

140 SERVICE INFORMATION

Mech. Code M11

5-20-70

TORQUE LIMITER SHAFT

Loose Stepping Ratchet: Some MT/ST's have been sent to the Field with out-of-specification stepping ratchets (M11, Ref. 10). The ratchet wheel may turn on the hub.

If a call is taken and the "along-the-tape" adjustment has changed considerably, the cause may be a bad stepping ratchet. A specific serial number range is not available. However, all machines above 114975 have good stepping ratchets installed.

NOTE: If the stepping ratchet is found to be defective, replace it.

141 SERVICE INFORMATION

Mech. Code M32

5-20-70

MT/ST

Mounting 6 Position Relay Base: There is no 6 position lower relay base clip. When installing a 6 position relay base use either a 4 position lower base clip — P/N 308704 or a 12 position lower base clip — P/N 284424.

142 ENGINEERING CHANGE

Mech. Code 531

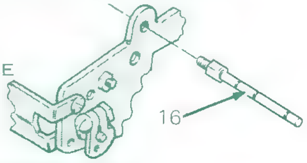
5-20-70

SUBJECT: On-Off/Tab Keybutton Mounting Stud— Replaceable

SOLUTION: Tap the hole in keyboard side frame using a 8-32 tap and install the new replaceable stud.

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
16	1203582	Stud Replacement 8-32 Thread	.45



THE FOLLOWING INFORMATION IS FOR IBM USE ONLY

TYPE OF CHANGE: Serviceability ● CODE: Use Applicable Service Code.

PARTS INFORMATION: Order Lexington. Regular or emergency.

143 SERVICE INFORMATION

Mech. Code 526

5-20-70

I/O

Paper Feed Levers Breaking: To help prevent breakage of the paper feed levers, (multiple copy control, Index Selector and feed roll release) be sure to roll the I/O all the way forward in the tilt-up tracks before tilting the machine back. The feed roll release lever should be kept in the forward position when the machine is tilted up to prevent interference with the rear cover shock mount.

In ring mount covers when returning a machine to its normal position, be sure these levers don't catch under the ring.

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144 ENGINEERING CHANGE

Mech. Code 527

6-3-70
(Revised) 8 26-70

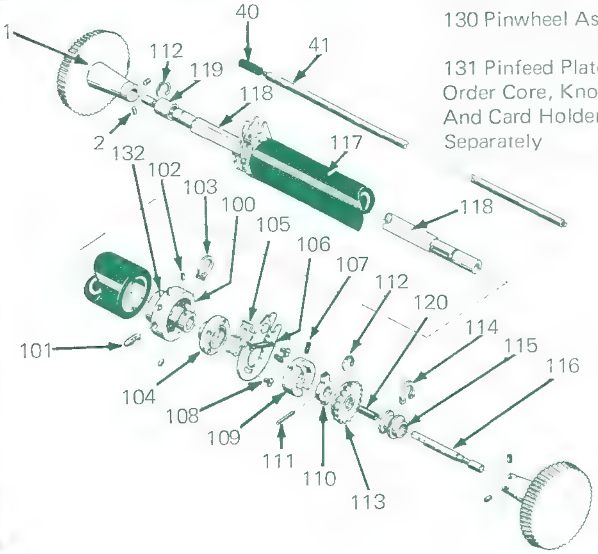
SUBJECT: Pinfeed Platen – Redesigned

PURPOSE: Larger Pins (.140" diameter)

ADJUSTMENTS: Pinwheels are set screwed to shaft to hold platen core in position.

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
1	1135065	Knob Gray 11	1.00
1	1135377	Knob Gray 15	1.00
1	1159299	Knob Navy 11	1.00
1	1159455	Knob Navy 15	1.00
1	1159745	Knob Char Gray 11	1.00
1	1159746	Knob Char Gray 15	1.00
1	1159295	Knob Lt Blue 15	1.00
1	1135570	Knob Lt Blue 11	1.00
2	1175107	Set Screw	.05
40	1128529	Spring	.05
41	1128530	Rod Anchor 11	1.15
41	1135323	Rod Anchor 15	1.75
100	1203784	Pinwheel Body	10.85
101	1203783	Pin, .140"	.65
102	257957	Screw	.10
103	2155979	Retainer	.10
104	1203787	Cam	2.65
105	1203786	Cam Control Plate, RH	.80
105	1203788	Cam Control Plate, LH	.80
106	1203785	Spring	.10
107	1175106	Screw	.10
108	1127785	Screw	.05
109	1203742	Guide, Platen Variable	7.00
110	1203745	Driver	4.00
111	1128526	Pin	.02
112	236571	Retainer	.04
113	1203737	Ratchet, 27T	2.40
113	1203738	Ratchet, 36T	2.40
113	1203739	Ratchet, 45T	2.40
113	1203740	Ratchet, 48T	2.40
113	1203741	Ratchet, 54T	2.40
114	311072	Retainer	.04
115	1203743	Bushing	1.00
116	1128525	Shaft, 11	1.45
116	1135337	Shaft, 15	1.50
Platen Cores	**Pin to Pin Dimension**		
117	1203934	5 1/4"	5.00
117	1203935	6"	5.00
117	1203936	7 1/2"	5.00
117	1203937	8"	6.00
117	1203938	9"	6.00
117	1203939	9 3/8"	6.00
117	1203940	9 7/8"	6.00
117	1203941	10"	6.00
117	1203942	10 1/8"	6.00
117	1203943	11 1/4"	7.00
117	1203944	11 1/2"	7.00
117	1203945	12 1/2"	7.00
117	1203946	13 1/8"	7.00
118	1203780	Shaft, Platen 11	7.10
118	1203744	Shaft, Platen 15	9.10
119	1203747	Bushing, LH	.25
120	1090568	Spring	.01
130	1203781	Pinwheel Asm. RH	22.00
130	1203782	Pinwheel Asm., LH	22.00
131	1275604	B/M, 11	65.45
131	1275605	B/M, 15	74.45
132	437289	Roll Pin	.03



130 Pinwheel Asm.

131 Pinfeed Platen B/M
Order Core, Knobs,
And Card Holder
Separately

MACHINES AFFECTED: Machines using forms with larger holes.

THE FOLLOWING INFORMATION IS FOR IBM USE ONLY

ESTIMATED INSTALLATION TIME: .3 hours.

RECORDS: Part numbers will be added to next Part No./Price List (F/N 241-5528).

TYPE OF CHANGE: Manufacturing Improvement ● CODE: Use applicable Service Code.

PARTS AVAILABILITY: Lexington. Order regular or emergency.

STOCK DISPOSITION: Present pinfeed platens (.125" pins) remain available.

145 SERVICE INFORMATION

Mech. Code M-32

6-3-70

RELAY GATE

Relay and Electronics – Print J Wiring Error: On MT/ST's with K-Pack Search Right Station in Transfer and Print J, R129 is used for the Print J MES.

The Field installation instructions read:
Add 3.5" blue jumper from 131-2 O/P to 129-4 O/P.

This step should be:
Add 3.5" blue jumper from 131-1 O/P to 129-4 O/P.

This change should be made on any machine with this MES installed.

146 SERVICE INFORMATION

Mech. Code M-32

6-3-70

RELAY GATE

Relay and Electronics – Playback Errors in Transfer: A breakdown in the arc suppression around the stepping magnets (RC86-2) can cause a machine to error in transfer and not in playback. If inserting the 48 volt test light in the RC86-2 point resolves the problem, replace the RC block (P/N 328602).

147 SERVICE INFORMATION

Mech. Code M-27

6-3-70

SEARCH SOLENOID AND MAGNET

Search Magnet Residual: When ordering search magnet residual (M27, Ref. 4), order only from new Parts Catalog F/N 241-5158-0. Residual P/N 1161375.

NOTE: This is the same residual as used on the console cycle clutch.

148 SERVICE INFORMATION

6-3-70

Austin Field Transfer Machines – (A.F.T.): Recording machine serial numbers. When recording the serial number on the machine history card, insert above the serial number the following notation:

"A.F.T. – Use Service Code 41 for 90 days."

NOTE: Do Not Use Service Code 12.

149 SERVICE INFORMATION

Mech. Code M45

7-1-70
(Revised) 8-26-70

DESK HARDWARE

Returning Desks – Austin Field Transfer: When returning desks to the Austin Plant that are found to be "unacceptable" by the customer, in addition to the regular address, please specify on the shipping label or tag the following:

ATTENTION: L. Wormley Dept. 033

It is important that Dept. 033 visually inspect these desks.

The above request applies only to those desks regarded by the customer to be "unacceptable". Ship all others per usual.

150 SERVICE INFORMATION

Mech. Code 516 519

7-1-70

CARRIER RETURN – TAB

White Cords On "Selectric" I/O Typewriters: Field experience indicates the white nylon cords used on the "Selectric" Typewriter can be used on "Selectric" I/O's. The white cords are currently being installed on Austin Field Transfer Machines. However, because of manufacturing reasons, new I/O's built in Lexington will continue to have the black cords installed.

NOTE: If random unexplained escapement problems occur after the white cords are installed the black cords should be reinstalled.

Part numbers for the black cords are listed in the MT/ST-I/O Parts Catalog. The part numbers for the white cords are listed below.

White Cord Tab 11" Machine	1128378	.35
White Cord Tab 15" Machine	1128379	.35
White Cord Carrier Return 11" Machine	1128379	.35
White Cord Carrier Return 15" Machine	1128380	.35

163 SAFETY

Mech. Code M36 — 8-7-70

SUBJECT: Cable Clamp—MT/SR Control Panel

Previously published in CEM 167 10-16-68

SAFETY LOCATION: M-36 Ref. 45 cable clamp has sharp edge.

SAFETY PRECAUTIONS: Observe that sharp edge is not encountered when installing or removing tape bin.

SAFETY CORRECTIVE ACTION: Position clamp so that sharp edge is toward front of machine.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Safety ● CODE 32

164 SERVICE INFORMATION

Mech. Code M22 — 8-7-70

BUFFER ARM—LUBRICATION

Insufficient lubrication at the buffer arm (M22-34) pivot point can cause leader dropping, search errors, playback & record errors, and head skew. Use No. 10 oil.

165 ENGINEERING CHANGE

Mech. Code 510 — 8-7-70

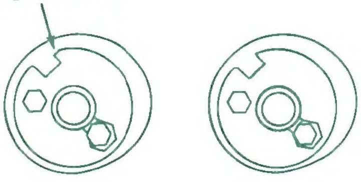
SUBJECT: Carrier Return Cam Check Ring Redesigned

PURPOSE: To prevent buzzing cams.

SOLUTION: The edge of the check ring notch has been removed to prevent interference with the check pawl.

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
097	1203717	Ring Ck Yellow	.45



New Style   Old Style

THE FOLLOWING INFORMATION FOR IBM USE ONLY

TYPE OF CHANGE: Reliability ● Use applicable service code

PARTS INFORMATION: Scrap existing stock of P/N 1166382 on a Debit Memo, charge OPHQ Acct. Code 14-090-0232 and note this CEM as authorization.

166 SERVICE INFORMATION

Mech. Code M40 — 8-7-70

Plant Installed CEM 98: On Austin reapplied MT/ST's, CEM 98 is installed directly under the console motor on the bottom of the tape deck. The wire tie buckle can be sighted from either side of the tape deck.

167 SERVICE INFORMATION

Mech. Code M20 — 8-7-70

Cartridge Detenting — Two-Piece: The possibility exists on some machines that the TWO PIECE cartridge will walk off the station platform causing machine lockup. This may be caused by either the station block (ref. 006) being too high or the leader interposer pin not allowing the two piece cartridge to center over the detent balls on the platform. To determine proper station block height, measure the distance from the top of the station platform to the bottom of the TWO PIECE cartridge as shown in Figure 1. If this clearance is greater than .020" remove the station block (ref. 006). If there is a shim under it, dispose of the shim and reinstall the station block. If there is no shim and the clearance is too wide, replace the station block. In either case, before reinstalling the block, shave the top of the leader interposer as shown in Figure 2.

This will prevent the leader interposer from contacting the bottom of the cartridge guide plate before the tape cartridge is fully detented.

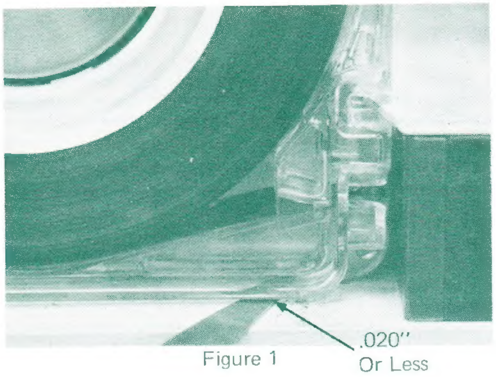


Figure 1

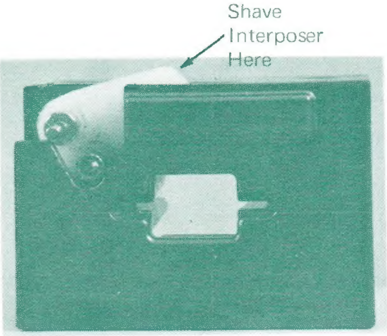


Figure 2

Use Code 32 only on machines experiencing this problem. Expires: 8-1-71

168 SERVICE INFORMATION

8-26-70

TAPER PINS—YELLOW WIRE

On some CEM's in the "Parts Required" section, taper pins have been omitted. Any CEM calling for yellow wire will require taper pins P/N 187243.

169 SERVICE INFORMATION

Mech. Code M08 — 8-26-70

BIAS CLUTCH—AUSTIN REAPPLIED MT/ST'S

Bias clutches will no longer be automatically replaced on reapplied MT/ST's. The bias clutches will be checked for proper tension and significant adjustment range. Clutches checked in this manner will be stamped with the number 430 for identification.

170 ENGINEERING CHANGE

Mech. Code 518 — 8-26-70

SUBJECT: Backspace Rack And Mounting Studs Redesigned 73X

PURPOSE: To eliminate backspace rack binds.

SYMPTOM: Backspace rack mounting stud shoulder tries to seat in hole in spacer causing rack to bind.

SOLUTION: Backspace rack mounting stud shoulder increased .030 inch in diameter and rack slots increased .030 inch in width.

The new level stud can be identified by its dull gray color.

Backspace racks replaced on earlier level machines with silver color studs must have new level studs installed also.

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
3	1147335	Stud	.05

Backspace rack P/N's remain the same. Old-level stud will remain available for replacement purposes.

MACHINES AFFECTED: 73X above S/N 5944715 have this change installed.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Reliability ● Use Applicable Service Code

PARTS INFORMATION: Scrap existing stock of P/N 1147320 and 1147319 and reorder using same P/N. Record scrap on a debit memo charging OP HQ Acct. No. 14-090-0232 and note this CEM as authorization.

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171 ENGINEERING CHANGE

Mech. Code 527

8-26-70

SUBJECT: Vertical Format Control (Beaded Chain)

PURPOSE: SER provides for automatic positioning of continous form documents on a pin feed platen.

REQUIREMENTS:

This device is designed for use on MT/ST systems after S/N 83152 (commonly known as group III machines), but may be installed on older systems provided they have previously been equipped with a level change. (Group I & II machines that had a relay gate change.)

CONSOLE & I/O

This feature will require additional MT/ST relay logic, but no changes to the tape deck. A Page Code 1, 3, 5, 6, 7—bit is used for the purpose of continuous forms feed. When a Page Code is read, the I/O will repeat Carrier Return until a large bead is sensed.

The Revise C/R keybutton is replaced with a page code keybutton. The I/O covers are replaced with a modified cover to accommodate the beaded chain mechanism.

MODE CHANGE

Conventional MT/ST operation requires use of a jumper plug and a standard platen.

COMPATIBILITY

This feature is compatible with Code Conversion, Reverse Search and Program Search. It is **not** compatible with Composer Compatibility (K-Pak) machines.

ADJUSTMENTS

1. First Line and Body Skip Switches: Fig. No. 1

   Connect an ohm meter (RX1 scale) from N/O terminal to the O/P terminal (Fig. No. 1a). Adjust the position of the switch roller on the large bead so that there is .015" overthrow after the switch transfers (Fig. No. 1b).

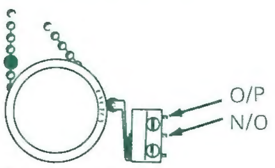


Figure – 1A

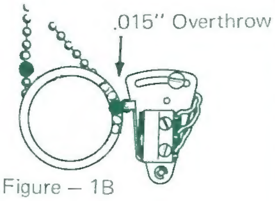


Figure – 1B

2. Chain Sprocket Hub: Fig. No. 2

   Loosen the hub set screws (Fig. No. 2a) and make sure the platen assembly is in place and properly detented. Rotate the hub on the sleeve until the switch rollers are centered on the small beads (Fig. 2b). The hub must be fully to the left on the sleeve before tightening the set screws.

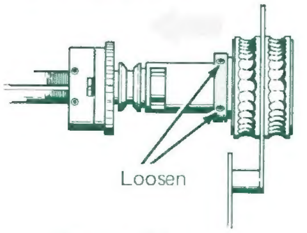


Figure – 2A

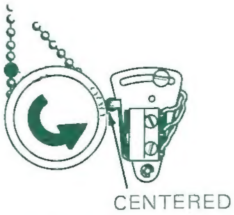


Figure – 2B

3. Idler Adjustment: Fig. No. 3

   Adjust the large idler so there is a little slack in both chains. The small idler can be used for fine adjustment.

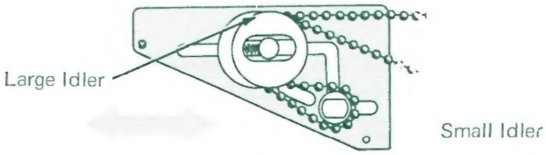


Figure – 3

CAUTION

Adjust for moderate tension. Chains which are tight could cause malfunctions in the index mechanism. Be sure that the entire platen mechanism is free of binds.

4. End-of-Forms Switch:

   Adjust so switch is closed with paper installed and is open with paper removed.

CHAIN MAKING

Detailed information relative to chain making, form lengths, operator instructions, etc. is outlined in SER No. 800058. Specific operator instructions can be obtained through the Education planning Dept. 945 Austin Plant.

PARTS REQUIRED:

REF.	PART NO.	BEAD PACKAGES FORM LENGTH (In Inches)
150	1108454	2, 3, 4, 6, 12
151	343631	3.5, 7, 14
152	827950	4.5, 9
153	827913	5, 10
154	827915	5.5, 11
155	344308	6.5, 13
156	827922	7.5, 15
157	343632	8, 16
158	827912	9.5
21	1176509	Card Holder (metal) 10 Pitch
21	1176510	Card Holder (metal) 12 Pitch
168	1458078	Plug—Jumper
169	1176856	Bracket—Paper SW Lockout
170	1176852	Bracket—End of Forms SW
1	1135377	Knob Platen
2	257968	Screw Platen Knob
171	1187630	Switch
173	1166284	Keybutton—Page Code
1*	343641	Pliers (Bead Closing)

*Tools & Test Equipment Catalog F/N 291-5542

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

ESTIMATED INSTALLATION TIME: 5.1 hrs., Plant or Field installed.

CHANGE TYPE: S.E.R. ● *Use applicable service code.*

PARTS INFORMATION: Order Lexington.

151 SERVICE INFORMATION

Mech. Code M15 7-1-70

SUBJECT: **Finger Springs (P/N 1160068)– Out Of Specification**

Information Previously Printed in ATB No. 169

A large percentage of the field stock stepping finger springs (M15, Ref. 15) are out-of-specification, the edge of the spring is burred. These burrs will cause the spring to break.

Scrap all springs in present stock and reorder from Lexington. Scrap on debit memo to account code 14-090-0232.

When installing these springs DO NOT form them.

152 ENGINEERING CHANGE

Mech. Code M03 7-1-70 (Revised) 8-26-70

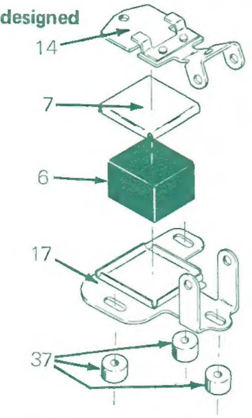
SUBJECT: **Cycle Clutch Base Assembly Redesigned**

PURPOSE: Redesigned for greater serviceability.

SYMPTOM: With the old-style, if the rubber shock absorber cracks, the base plate must be replaced.

SOLUTION: Install the new-style (Fig. 1), Ref. 7, cup, Ref. 6, shock absorber, and Ref. 17, base plate. The spacers, Ref. 37, will be installed in the new machines but do not need to be installed in the field; the existing spacer block can be used.

ADJUSTMENTS: Remain the same.



PARTS REQUIRED:

REF.	PART NO.	QTY.	DESCRIPTION	PRICE
7	1161381	1	Cup	.75
6	1161378	1	Shock Absorber	1.00
17	1161384	1	Base Plate	3.90
37	1160008	3	Spacer	.25

MACHINES AFFECTED: All MT/ST's, MT/SC, MT/SR's and TTR's: MT/ST's above S/N 115590, MT/SC's above S/N 23700, MT/SR's above S/N 62483 and TTR's above S/N 120232 will have this change plant-installed.

THE FOLLOWING INFORMATION IS FOR IBM USE ONLY.

ESTIMATED INSTALLATION TIME: 0.4 hrs.

CHANGE TYPE: Serviceability ● Use Applicable Service Code

PARTS INFORMATION: Lexington, Regular or emergency. Use existing stock of P/N 1160017 until depleted.

153 ENGINEERING CHANGE

Mech. Code M32 7-1-70 (Revised) 8-7-70

SUBJECT: **Arc-Suppression Around CB-5 and CB-7 — Improved**

PURPOSE: Better arc-suppression network around CB-5 and CB-7.

SYMPTOM: CB-5 and CB-7 failure due to pitted contacts.

SOLUTION: Perform the following tape deck wiring changes. (Use pages C8.03.1 or C8.03.2 of the machine system prints as a reference to locate edge connectors on tape deck.)

1. Insert the 14- and 16-inch jumpers from the B/M into the shrinkable tubing and position them so that an equal amount of each jumper extends from each end of the tubing. Heat the tubing slightly with a match or lighter at both ends until the tubing shrinks. (Do not hold flame too close.)
2. Locate the ground (black) wiring coming from the cycle clutch armature to edge connector D. Remove it and plug it into an unused row of the edge connector.
3. Add a brass or a 3.5" blue jumper from the unused row selected back to the point the cycle clutch armature ground wire was removed from.
4. Route the two-wire cable under the tape deck between edge connectors D and F. Route the cable so that it is positioned to the left of the right rear tape deck shock mount (see Figure 1) and breaks out between the D edge connector and the leader sense switches.
5. Install the longest wire of the cable located at edge connector D into the same row that the pick coil of the cycle clutch armature is locacted in (normally Da).
6. Install the short wire in the same row that the cycle clutch ground wire is now located.
7. Install the longest cable wire at edge connector F into Fc.
8. Install the shortest wire into Fg.
9. Install the resistor between Fc and Fe.
10. Install the capacitor between Fg and Fe.
11. Check the routing of the cable to be sure it is not rubbing against any metal parts of the tape deck.

Perform the following wiring changes on the relay gate:

1. Move the blue jumper located in RC-86-3 to RC-86-2 (other end remains in RC-86-4).
   a. On machines with K-pack installed, either active or inactive, it will be necessary to remove the orange cable wire in RC-86-2 to make room for the above jumper.
2. Move the blue jumper located in RC-86-4 to RC-86-3 (other end remains in D 75-4C).
3. On K-pack machines, install the wire removed in step "1a" above into RC-86-4 (other end at 12-6OP).

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
601	1127455	Capacitor, .25MFD	2.95
652	1160691	Resistor, 110 ohm	.40
725	129243	Jumper, 3.5" Blue	.10
735	205331	Jumper, Brass	.01
738*		Tubing Shrinkabe 11"	
725	1161414	Jumper, 14"	.15
725	1161416	Jumper, 16"	.15
	1161457	B/M Contains All Of The Above	3.80

*For Ref. Only.

MACHINES AFFECTED: All MT/ST's above S/N 83153 require this change. All MT/ST's below S/N 83153 that have had a level change gate require this change. MT/ST's S/N 113326 and above have this RC network plant-installed in edge connector "D".

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

ESTIMATED INSTALLATION TIME: 0.4 hours.

CHANGE TYPE: Reliability ● CODE: 32 ● EXPIRES: 3/1/71

PARTS INFORMATION: Lexington. Order regular or emergency.

154 SERVICE INFORMATION

Mech. Code M11 7-29-70 (Revised) 8-7-70

STEPPING RATCHETS

On MT/ST units between approximate S/N 113749 and 115062 and MT/SC Readers between S/N 23375 and 23474 a possibility exist that there is a soft spot in the stepping ratchet. If a stepping problem is suspected on these units, check the entire circumference of the ratchet for rounded teeth. Replace the ratchet if this condition is found.

155 SERVICE INFORMATION

Mech. Code M32 7-29-70 (Revised) 8-7-70

OPEN LAND - MODEL V

An open land between F5D13 and F7D13 on the Model V board can be caused by shorting the I/O 'c' contacts to ground. Symptom—missing +48 volts to the 'C' contact.

This can be corrected by wire wrapping a blue and white wire from F5D13 to F7D13.

156 SERVICE INFORMATION

Mech. Code M36 7-29-70 (Revised) 8-7-70

SHORTED WIRES

When the control panel is raised, the cable to the encode and playback switches may rub on the console frame and fray the insulation. This can cause fuse blowing problems when the front cover is raised or lowered. If this condition is noted, tape the console frame and the wires.

157 SERVICE INFORMATION

Mech. Code 525 7-29-70

MARGIN MECHANISM

Sharp Pins – MT/ST-I/O Units: The tip of the margin lever pin (Ref. 007) has been clipped off on some machines. If this condition is noted, file or stone any sharp edges found.

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158 SAFETY

Mech. Code **M-40** 8-7-70

SUBJECT: Console Side Covers—Sharp Corners

Previously published in CEM 193, 7-16-69

SAFETY LOCATION: Corners on MT side cover tabs.

SAFETY CORRECTIVE ACTION: File corners of two top tabs to remove sharp edges.

MACHINES AFFECTED: All MT/ST's below S/N 100568, MT/SR's below S/N 61185, MT Readers below S/N 21350 could have this conditions.

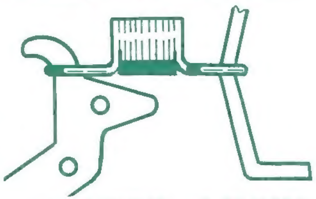
THE FOLLOWING INFORMATION FOR IBM USE ONLY.

CHANGE TYPE: Safety ● CODE 32

159 ENGINEERING CHANGE

Mech. Code **516, 517, 518** 8-7-70

SUBJECT: Operational Latch Spring - Breakage — Backspace, Spacebar, Tab



SYMPTOM: Breaking I/O operational latch springs.

SOLUTION: Check machines on the next service call or inspection for proper installation of these springs.

If the springs are not installed as shown, they should be replaced with new springs.

MACHINES AFFECTED: 73X between S/N 5937363 and 5941004, MT/ST printers between console S/N 111885 and 115692.

PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
33	1187181	Latch Spring	.04

THE FOLLOWING INFORMATION FOR IBM USE ONLY

CHANGE TYPE: Reliability ● CODE 32 ● EXPIRES: 8-1-71.

160 ENGINEERING CHANGE

Mech. Code **M-32** 8-7-70

SUBJECT: End Of Tape Function On MT/SR—Improve

PURPOSE: Correct line return problem at end of tape.

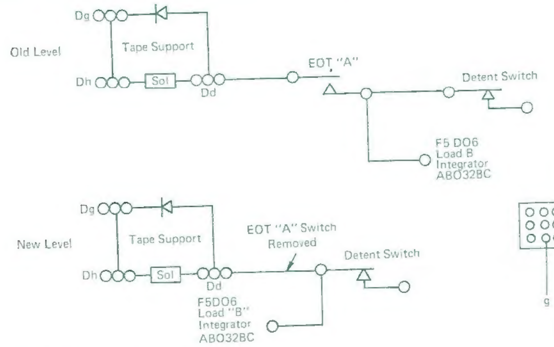
SYMPTOM: At end of tape, depressing line return causes continuous tape reading because tape support is held down by high bias.

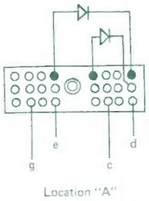
SOLUTION: Perform the following steps on the MT/SR Console:

1. Install diode terminal block assembly (P/N 1202790) in location "A" in the tape deck (Front/left hand position).
2. Check to see that diodes are installed as shown below.
3. Remove and tape the tape deck wire from EOT "A" OP to Dd.
4. Remove, splice together and tape both the wires at EOT "A" N/O switch.
5. Add the following tape deck wires:
   From detent out OP to Dd
   From EOT "A" N/C to Fh
   From EOT "A" OP to Aa
   From Paddle Conn. F5 D04 to Ad
   From Paddle Conn. F5 D02 to Ae
6. Add the following wire wraps to the electronic gate:
   From F4 D12 to F5 D04
   From F5 D02 to F7 D09

ADJUSTMENTS: Check the EOT Switch position with tape under the roller for .015"-.025" (.38-.63mm) overthrow after switch transfers.

ADJUSTMENTS AFFECTED: None.

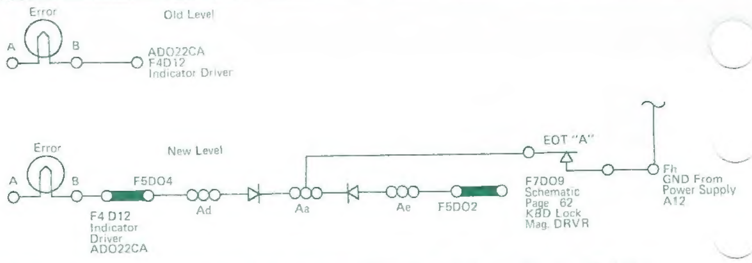




PARTS REQUIRED:

REF.	PART NO.	DESCRIPTION	PRICE
050	1202790	Term Block Assm.	4.90
745	1264286	Yellow Wire 100 Feet	.95
740	187243	Taper Pins	.02
152	1202900	Maint. Diagram Manual	*

*Price not available at time of printing.



NOTE: Use wire wrap tools as shown in Tools & Test Equip. Catalog (F/N 241-5542-0) page 29.

MACHINES AFFECTED: Below approx. S/N 62252. All Austin reapplied MT/SR's have this change.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

ESTIMATED INSTALLATION TIME: 1.5 hrs.

RECORDS: Replace old Maint. Diagram Manual with new manual.

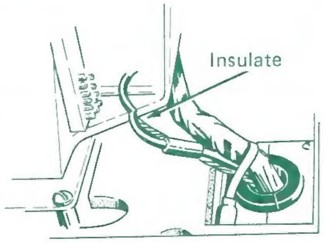
CHANGE TYPE: Reliability ● Use Applicable Service Code.

PARTS INFORMATION: Maint. Diagram Manual on emergency basis only — other parts order Lexington.

161 SAFETY

Mech. Code **M-01** 8-7-70

SUBJECT: Tape Deck Motor Leads Shorting



SAFETY LOCATION: Tape deck casting & motor leads.

SAFETY PRECAUTIONS: There is a possibility of shorted wires caused by the primary power leads to the tape deck motor chafing against the tape deck casting due to vibration.

SAFETY CORRECTIVE ACTION: On the next inspection or service call insulate the tape deck casting from the motor leads by taping the leads in the area shown.

MACHINES AFFECTED: All MT/ST, MT/SR & Mod. V's.

THE FOLLOWING INFORMATION FOR IBM USE ONLY.

ESTIMATED INSTALLATION TIME: .2 hr.

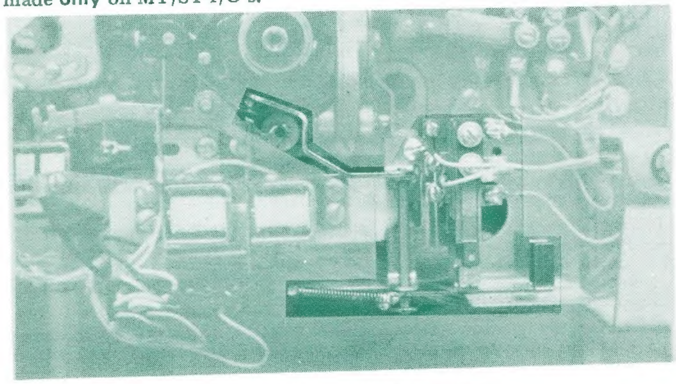
CHANGE TYPE: Safety ● CODE 32

162 ENGINEERING CHANGE

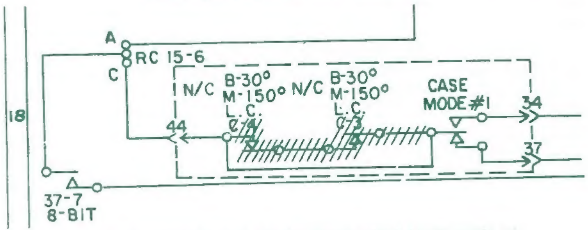
Mech. Code **523** 8-7-70

SUBJECT: C3 and C4 Contacts—MT/ST-I/O's

PURPOSE: The C3 and C4 contacts have been eliminated on new machines and are being removed from Field transfer machines as they are processed in Austin. This change does not affect the timing of other I/O contacts or the operation of the MT/ST console. This change can be made only on MT/ST-I/O's.



These parts have been removed



THE FOLLOWING INFORMATION FOR IBM USE ONLY.

NOTE: Whenever you make this change be sure to mark the system diagrams.

CHANGE TYPE: Reliability ● Use Applicable Service Code.